THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—44TH YEAR SYDNEY, SATURDAY, APRIL 6, 1957 No. 14

Table of Contents.

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ORIGINAL ARTICLES— Page

Erysipeloid, by Maurice Ewing 449
Sunlight as a Cause of Melanoma: A Clinical Survey, by H. O. Lancaster and Janet Nelson .. 452
Bridges Old and New, by F. Kingsley Norris, C.B., C.B.E., D.S.O., E.D., M.D. 456
Medical Practice in Central Northern Territory, by R. C. Webb 460
Serology of a Strain of Rickettsia Australis Isolated in South-East Queensland, by C. G. Ludford and Ian Cook 463

REVIEWS—

Handbook of Histology 465
A Text-Book of Mental Deficiency 465
Lymphatics, Lymph and Lymphoid Tissue 465
The Complete Cookery Book for Diabetics 465
Fundamentals of Immunology 466

BOOKS RECEIVED 466

LEADING ARTICLES—

Health Habits and Heart Disease 467

CURRENT COMMENT—

Silo-Filler's Disease 468
Differential Lung Function: Its Estimation with out Bronchospirometry 468
The History of a Great Hospital: L'Hotel-Dieu and Its Functions 470
Space Travel 471
Blood Transfusion Centres in Italy 471
The Approach to the Schizophrenic 471

ABSTRACTS FROM MEDICAL LITERATURE—

Therapeutics 472
Neurology and Psychiatry 473

BRITISH MEDICAL ASSOCIATION NEWS— Page

Meeting of the Federal Council 474

OUT OF THE PAST 485

CORRESPONDENCE—

Congenital Malformations and Maternal Rubella .. 485

POST-GRADUATE WORK—

Australian Vice-Chancellors' Committee: Nuffield Dominions Trust 486
The Post-Graduate Committee in Medicine in the University of Sydney 486
Symposium on the Basic Sciences Related to Anæsthesiology 486
The Melbourne Medical Post-Graduate Committee 487

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA 487

NAVAL, MILITARY AND AIR FORCE—

Honours 488

UNIVERSITY INTELLIGENCE—

The University of Sydney 488

NOMINATIONS AND ELECTIONS 488

CONGRESSES—

NAPT Commonwealth Chest Conference 488

DEATHS 488

DIARY FOR THE MONTH 488

MEDICAL APPOINTMENTS: IMPORTANT NOTICE .. 488

EDITORIAL NOTICES 488

ERYSIPELOID.[1]

By MAURICE EWING,
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MORRANT BAKER was a surgeon in London in the latter days of the pre-antiseptic era. He was a protégé of Sir James Paget, and had a reputation in his early days as a teacher and as co-editor of a very popular text-book of physiology. It was only relatively late in life that he achieved any real eminence as a surgeon, although he was always immensely popular with students and was a boxer of some ability and a good change slow bowler. You will remember his name best in relation to a paper which he wrote on synovial cysts associated with arthritis of the knee, although as to what is meant by a Baker's cyst I am still by no means clear. He was, however, also interested in the surgery of the skin. His obituary notice drew attention to an authoritative paper which he wrote on cutaneous anthrax, but makes no mention of a paper which he published in 1873 on a curious infection of the skin which he had observed in 16 patients whose histories he cited (Baker, 1873). The condition seemed most often to follow a trivial injury and, because it had such distinctive clinical features, one of which was its curious habit of spreading by direct continuity to adjoining areas of skin in a peripheral direction, he gave it the name "*erythema serpens*". However, this name is remembered now only in an historical context, and the alternative synonyms "*erythema migrans*" and "chronic erysipelas" have also been set aside.

Baker believed the condition to be a variant of erysipelas, in so far as the primary injury had not penetrated deeply enough to cause the more serious form of the disease. Further, he drew attention to what is believed to be another example of the same condition in a report by Dr. Fox, of University College Hospital, written three years before (Fox, 1870). His patient was a young man who worked in a cheap kid-boot shop, and who came to hospital with a red, swollen and stiff finger. The lesion was attributed to the dyestuffs from the leather with which his hands became contaminated during the course of his work, for it cleared up after a few days' rest and relapsed as soon as he returned to duty.

Just over ten years later there appeared the first of the classical studies of Rosenbach (1884), who, in a series

[1] Read at a meeting of the Alfred Hospital Residents' Clinical Society on July 4, 1956.

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of writings during the next few years (the last appeared in 1909), first clearly established the disease as a clinical entity and gave to it the name "erysipeloid". It has since been given the eponymous title of the "erysipeloid of Rosenbach", and it is by this name that it is now known in most of the medical writings of our time.

My attention was first drawn to this form of infection by an article in one of the medical journals some time before the last war, and I was immediately interested, for here I saw recorded in print for the first time an account of an illness which I had met with many times during a spell of duty in the hospital casualty department. These were patients—and it seemed in my experience to be by no means uncommon—who came with what appeared at first sight to be a streptococcal infection of the skin of the hand. However, the redness was never vivid, but a dull purplish red, and the patients never looked really ill. On the contrary, the illness ran a mild course, although it seemed often in a mysterious way to relapse, but always resolved without pus formation, and caused and left no disability. It was our practice then to ask the patients to attend daily for very large and very expensive and very messy and very offensive soakings of ichthyol and glycerin; but the cost was considered justified, in all cases, by the excellence of the end result.

I was further alerted by reading this article, and soon came, even in my very limited experience, to recognize erysipeloid with increasing frequency, first in the Midlands of England and later in my native Scotland. In the years that followed the end of World War II it attracted a considerable amount of attention in the United Kingdom, and it was at this time, I believe, that a good many surgeons first became aware of it as a form of infection with a quite distinctive clinical picture.

One of the features of medical education in our time is that the vast majority of the ailments which will occupy the attention of our young graduate in general practice never penetrate into a hospital beyond the casualty department, and this is certainly true of erysipeloid. Since I have enjoyed the doubtful privilege of retreating into the inner reserves of surgery in hospital, protected against all the troubles and difficulties which beset people in the hurly-burly of practice outside by a row of residents and registrars, I have encountered no single case; certainly none in the past ten years.

When the Alfred Hospital Residents' Clinical Society did me the honour of asking me to address them, I thought I might profitably call attention to this disease, in the belief that it is much more common than is often realized or admitted, and that cases may well come your way in the casualty department. I have since had considerable misgivings about the selection of this topic, and for the following reasons: firstly, because of my lack of recent experience in the diagnosis and management of the condition; secondly, because I really have not a great deal to tell you about it; and thirdly, because perhaps after all it does not occur in this city or State or country. People here certainly shake their heads when I mention it to them, and it receives no attention at all in the report of the National Health and Medical Research Council, which was published last year. However, I was heartened to read an article by Dr. Speight (Speight, 1951), of Parramatta, who reported a personal experience of 1000 cases over a period of seven years. Of course, I hasten to admit that Parramatta is in New South Wales, and that what goes on there means nothing in Melbourne in the State of Victoria, and maybe there is some odd occupational or environmental reason why it should occur there. However, I am bold enough to make its alleged non-occurrence in this community the excuse for holding to my declared purpose and for enlarging on the subject of erysipeloid for at least twenty minutes.

Clinical Picture.

The disease is quite a characteristic one. It affects the hand always—although having said "always", one has to admit that there are a few exceptions to this general rule. The patient will usually admit to a trivial injury, but it is often unremembered and has seldom drawn blood. It is never of much consequence, and is usually no more than a scratch or a shallow and insignificant puncture wound or an abrasion. After an interval, which may be only a few days but may be as long as a fortnight, the surrounding skin becomes swollen, so that it is raised up to a height of three or four millimetres. However, its surface remains smooth and unbroken by the appearance of either papules or vesicles. As Klauder (Klauder, 1926) puts it: "The patch of œdematous skin looks precisely like the site of an intracutaneous injection." Somewhere near its centre one may still recognize the site of injury, seldom if ever the site of a pyogenic infection and commonly healed or nearly so.

The colour of the lesion is quite charatceristic; it is variously described as purplish-red, livid red, violet-red or dusky red. It has never the vivid redness of erysipelas. It looks like erysipelas which has cooled off; the fire has almost gone out. The colour can reasonably be said to be pathognomonic.

The margin of the red patch is sharply defined, and here again one is reminded of erysipelas; quickly it spreads peripherally to involve the adjacent skin. Speight (Speight, 1951) speaks aptly of its "bush fire" spread. As the edge advances, so the central part fades and flattens. Some reports state that it undergoes mild desquamation, whilst others hotly deny this termination. My personal recollection on this score is not sufficiently acute to allow me to express a worthwhile opinion.

The thin skin on the dorsum of the hand and fingers is most often affected, the tough, hard skin of the palm being, not surprisingly, considerably more resistant. It spreads by continuity, and has a curious habit of travelling up the side of one finger and then down the side of the next. The fingers become stiff and swollen, and the full range of movement is lost. It is uncommon for the infection to spread by direct continuity above the wrist crease.

Sometimes—and in my own experience this seems to feature quite largely—there are streaks of lymphangiitis up the forearm with enlargement of the regional nodes, a clinical picture which not unnaturally immediately causes some concern. However, the patient is seldom really ill. He may have the mildest of fevers and of general systemic upset; locally he complains of tightness, stiffness, itching or burning, and there is so little tenderness or real pain that he may often continue to work.

Untreated, the infection runs its own course, and resolution will be complete in anything from ten days to three weeks. Not uncommonly, and this again is a prominent feature of the illness—the condition seems to flare up for no very obvious reason, often a day or two after the patient has been discharged from the casualty clinic.

There is never pus formation, and there are no sequelæ and no complications. Ultimate resolution will be complete. I do not know whether or not a first attack will confer a lasting immunity—I suspect not.

Bacteriology and Epidemiology.

Rosenbach described the organism, which he isolated from a skin biopsy of one patient, and later he repeated the Hunterian experiments and injected a pure culture into his own arm, where he successfully produced the erysipeloid lesion. He later came to recognize the organism as the one which causes erysipelas in swine, an organism which Löffler had first grown in pure culture in 1885. It is interesting to note that it was with this organism that Pasteur had, in 1882, first demonstrated the method of artificial immunization by means of live cultures graded in virulence by "passage" in animals. The organism when passed through the rabbit is modified in virulence for the pig; "passage" through the pigeon has the reverse effect.

Swine erysipelas is unfortunately a very common disease, and constitutes a major problem in the economics of pig-rearing in almost every part of the world. However, its incidence in this country does not seem to be very high, or so at least is the evidence of the pig-rearer. It is

believed to increase in frequency after a spell of prolonged wet weather. The disease in pigs takes several forms—an acute septicæmic variety, fatal within a few days, or a subacute illness during which the skin becomes studded with hæmorrhagic patches, roughly quadrilateral in shape and sharply circumscribed—the "diamonds" or "diamond disease". A chronic form with crippling arthritis and endocarditis is also reported. The same organism is probably responsible for arthritis in lambs, which I am told is also an infrequent disorder in this part of the globe.

Experience shows that few patients with erysipeloid have any direct contact with swine erysipelas or even with pigs. It is true that cases have been reported of laboratory workers or veterinary surgeons who have inoculated themselves accidentally with virulent cultures used in the study of the disease or in the preparation of cultures used to protect swine by vaccination.

An epidemic was reported as following the eating of a few sausages containing meat from a pig dead from swine erysipelas; but, generally speaking, man is very resistant to this organism when it enters the alimentary tract.

The epidemiology of the disease is, in fact, a most interesting one—it is largely occupational in its distribution. Those of you who know Saint Bartholomew's Hospital will remember that it immediately adjoins Smithfield (London's main meat market—and incidentally the scene of the shameful hanging and quartering of that great Scottish patriot William Wallace). It was, no doubt, the presence of this great establishment next door which led to Morrant Baker's contact with the disease, for it is frequently found amongst butchers, not only of pork but equally of mutton and of beef, among slaughterman, and even in workers who handle cattle-bones to make buttons. McGinnes and Spindle (1933) reported no less than 247 cases in this last group. It is also met with in people engaged in pelt-mongering, and amongst those who handle hides, tallow and greases, fertilizers or lard, and even among bakers. It has also been reported in the wool-scouring industry, in which operatives are very liable to injury from the burrs in the wool. Poulterers are no better off. The disease can follow an injury from the bone of a chicken or even a parrot. Bush (1949) recorded the case of a veterinary surgeon who contracted the disease from a turkey which died from this cause. The housewife, certainly in Britain, is constantly at risk, and the infection may crop up for this reason in almost any community. It has been found widely in the animal kingdom, in the kangaroo, in the reindeer and even in the mink.

It seems clear, therefore, that the organism, *Erysipelothrix rhusiopathiæ*, must be ubiquitous; it is in fact present in all putrefying nitrogenous material, and is carried by house flies. It presumably lives as a saphrophyte, but seems to have an extraordinary ability to change its virulence quite suddenly and to cause disease. Although it is not a spore-former, it is resistant to heat and to cold, and has been shown to survive in putrefying meat for four months and in water for seventeen days. It can also be recovered even from salted meat.

But, the disease is met with most frequently in fishing communities, especially in the major fishmarkets like Aberdeen and Grimsby. One report from Aberdeen reported 235 cases (Proctor *et alii*, 1954). Klauder, of Philadelphia (1926), who has written extensively on all aspects of this infection, had at that time seen 1000 examples among the fishing community of the fish pounds of the New Jersey coast. It is also reported among the crab and lobster fishers of Chesapeke Bay (Gilchrist, 1904), and among people who collect shell fish; but it is said not to occur among people who work with oily fish—for example, in the sardine fleet, or among the tuna fishers or squid hunters of Hawaii. At one time constant immersion in salt water was thought to be the responsible factor; but the disease is seen among the fresh-water fishermen of the Great Lakes (Ritchie *et alii*, 1930), and in 1929 there was an epidemic of over 200 cases in Odessa among men who were handling landings from the fisheries of the Dnieper and the Bug (Stefansky *et alii*, 1930). The fish in this latter report were said to be in a perfectly fresh condition and to cause no trouble when eaten.

It is interesting that the Aberdeen workers did not find the infection much among trawlerman, although they spend a great part of the time gutting fish during the long trip back from Arctic waters. However, immediately the fish are caught they are committed to a refrigerated hold, and such fish are, not surprisingly, sterile when cultures are attempted. No one has, I believe, been able to demonstrate infection in freshly caught fish and from fish slime (Proctor *et alii*, 1954).

I have read somewhere that Norwegian sealers talk of "blubber" or "speck" finger, and say that the infection is reported to have been found in seals; but I have been unable to check this assertion by consulting the original text. Fisherman often believe fish slime to be poisonous; they talk of "fish hand" or "fish poisoning", and this view is shared by those who gut and bone fish for market or for canning (the "bone pullers"—Klauder, 1926)—and by the porters who handle boxes in and around the market. I have a suspicion that the "poison" is in almost all instances an erysipeloid infection. Even those engaged in less vigorous and less risky pursuits do not escape, for Klauder (1926) writes that he ". . . observed the infection on the feet of a vacationist, at the site of a puncture wound with a fish bone incurred while walking barefoot along the dried sand".

My attention was drawn recently to a very interesting communication by two workers in the Division of Fisheries of the Commonwealth Scientific and Industrial Research Organization (Sheard *et alii*, 1949) based on the clinical study of a group of crayfishers working on Houtman's Abrolhos, a group of coral islands off Geraldton on the Western Australian seaboard. The work was done by a bacteriologist working under exceedingly difficult field conditions with a consultant in medicine at some distance in Perth. The fishermen were found with great frequency to fall prey to cutaneous infections, which were not, however, all of the same type. However, some were due to *E. rhusiopathiæ*, and, as I remember it, he performed the Hunterian experiment and reproduced the disease in his own arm. The coral was believed amongst the men to be the cause, which was perhaps a good thing, for we read that bait consisted of cow hocks, sheep's heads and horse flesh in varying degrees of putrefaction; there were also many flies and little fresh water. It cannot be wondered at that *E. rhusiopathiæ* flourished excessively.

In all the reports of any considerable number of cases the seasonal incidence of the infection has been apparent, with a noticeable rise in the warmer summer months—namely, May to September in the northern hemisphere. It is true that the incidence of swine erysipelas follows the same pattern; but it seems more likely that these two observations are related to one another only in so far as they have a common cause.

Talking of epidemics of the disease may lead you to believe that in England, for example, it is a common disease; but I am sure that this is not the case. In University College it was detected only nine times among 591 hand infections (Pilcher *et alii*, 1948), and Lowden (1949) saw eight examples among 1000 septic hands in Sunderland. Erskine (1949), an industrial medical officer, encountered eight or nine cases a year, while supervising workers in the fat and bone trade. On the other hand, Charing Cross Hospital hand clinic had little trouble in reporting 115 cases, drawn, no doubt, from the interesting clientele of kitchen-maids of the many restaurants of Soho and the Strand (King, 1946).

Diagnosis.

Diagnosis should not constitute a serious problem. Erysipelas is the first thing which will come to mind, although if the swelling and redness are confined to the vicinity of a joint, the diagnosis of septic arthritis may also be entertained. However, joint movement will be limited less by pain and more by a feeling of tightness from the swollen soft tissues. The colour is distinctive: it

has not the vivid redness of erysipelas. Tenderness is less, and there is no significant fever or constitutional upset. Vesiculation is a rare happening.

There is seldom need to seek bacteriological confirmation of the diagnosis, although the organism can usually be recovered from incubating a slice of skin in glucose broth. There is an agglutination test for swine erysipelas; but in man there are no detectable agglutinins to *E. rhusiopathiæ*. An intracutaneous test has been described, in which the filtrate from cultures of the organism are used; but its application to man does not seem to be necessary.

As far as I am aware, the histological characteristics of the condition are in no way distinctive.

Course of Disease.

The disease is a perfectly benign one; it resolves spontaneously in a few weeks without treatment.

The organism has a distinctive capacity for altering in virulence, especially amongst pigs; but severe infections in man are very uncommon. When it does occur, it is often referred to as "swine erysipelas in man". Generalized infection by *E. rhusiopathiæ* was reported by Russell and Lamb (1940). Their patient was a lobster fisherman who died with endocarditis after an illness lasting for three months. Klauder *et alii* (1943) reported a similar case in a butcher in Philadelphia, who died after six months. In this case there was arthritis of the thumb with destruction of bone. Periostitis is a not uncommon feature of the disease in pigs. There is one case reported in the French literature in which the disease was alleged to have followed the eating of salt pork. The diagnosis was confirmed by blood culture. There were purpuric spots, a confluent red rash and severe anæmia with monocytosis. After some improvement the patient relapsed with acute nephritis and cardiac failure, and died.

Treatment.

It seems clear from reports in the literature that a course of penicillin will shorten an attack and lessen the discomfort. The rapidity and completeness of the relief are, however, variable and not quite predictable (Lowden, 1949). If penicillin is to be effective, dosage must be heavy and the treatment prolonged. However, the percentage of defaulters is high, and even after a few days of penicillin therapy relapses are only too common.

Prevention is obviously a matter of some consequence among people in the fish trades. Only the protection of gloves and soap and water is likely to help, with observance of the usual hygienic measures in the removal of putrefying nitrogenous material (Speight, 1951).

Conclusion.

It may well be that I have wasted your time talking of a disease which is not likely to come within your experience in this community. However, it may be that the odd case slips by unrecognized, and that it should for this reason be borne in mind. A crop of cases in the Alfred Hospital would be a gratifying sequel to this lecture; but I must admit that I have little reason to expect such a morbid dividend.

Acknowledgement.

I must acknowledge most gratefully help given to me in the preparation of this lecture by Miss Jean C. Tolhurst, bacteriologist to the Alfred Hospital.

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SUNLIGHT AS A CAUSE OF MELANOMA: A CLINICAL SURVEY.

By H. O. Lancaster and Janet Nelson,[1]

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With the aid of funds supplied by the New South Wales Cancer Council, a survey has been carried out to determine whether environmental factors (especially sunlight) or certain bodily characteristics (such as a fair skin) are of importance in the ætiology of melanoma. The evidence for suspecting sunlight or other climatic conditions has already been reviewed (Lancaster, 1956). We shall now describe our survey and draw the conclusion that those who produce little pigment in the skin are more prone to melanoma than those who produce pigment readily, and that sunlight appears to be as important in the production of melanoma of the skin as it is in the production of basal cell carcinoma and other skin cancer.

Methods.

All interviews after some trials at the beginning were carried out by one of us (J.N.). To facilitate the interviews a suitable *pro forma* was designed, and the details of the interview were summarized onto a summary card. The particulars of importance here recorded were as follows: (i) pathological diagnosis, (ii) site of primary growth, (iii) age, (iv) sex, (v) birthplace, (vi) length of life in Australia, (vii) race, (viii) hair colour, (ix) eye colour, (x) skin colour, (xi) skin texture, (xii) sensitivity of the skin to sunlight, (xiii) areas of skin exposed, (xiv) occupation, (xv) special industrial hazards, (xvi) war service, (xvii) outdoor recreations.

Source of Patients.

We were fortunate in securing the cooperation of all the major hospitals in Sydney. The out-patient and admission

[1] Working under a grant from the New South Wales State Cancer Council.

departments notified us of patients, and then an interview was arranged. On the same day, two other patients were interviewed belonging to the same sex and to the same age group, of whom one had a basal cell carcinoma, squamous carcinoma or keratosis and another had leuchæmia or some cancer of a site other than the skin; thus the three classes of patients can be compared without any disturbance which might have been introduced by different age and sex distributions.

However, melanoma is not a common form of malignant disease, and so we found that the most economical use of our time would be to interview patients in Adelaide, Melbourne and Brisbane. This extension of our survey was possible, as the large hospitals in each of the cities gave us permission to interview patients. The extension made our results somewhat more general than a survey in Sydney alone would have done.

It is desirable to conceal from the interviewer the diagnosis in such surveys (Doll and Hill, 1950), but it was not possible to do so in this survey for several reasons. First, the large number of hospitals each with but few cases would have made it difficult to establish a routine. Second, the interviewer was responsible for writing to the patients to arrange their visit to hospital. Third, the tumours in two of the classes of patients were cutaneous.

TABLE I.

The Age and Sex of Melanoma Patients in the Survey.

Age (Years).	Males.	Females.	Persons.
15 to 24	1	2	3
25 to 34	13	14	27
35 to 44	15	26	41
45 to 54	11	21	32
55 to 64	16	27	43
65 to 74	6	12	18
75 and over	5	4	9
Total	67	106	173

Diagnosis.

The diagnosis of melanoma was established as melanoma by examination of sections in 160 cases; two histological reports were "doubtful melanoma", and in 11 cases there was no record of a section having been taken, but other clinical evidence was sufficiently strong.

The colours of the skin, hair and eyes were classified subjectively, as once again we thought that exact quantitative records would be beyond our resources; and indeed there seemed to be no generally agreed classifications to assist us even if the costly spectrophotometric apparatus had been available.

The Characteristics of the Melanoma Patients.

We shall now review the importance of the various factors, giving tables when necessary. The percentages will be given to one decimal place, so that in any case multiplication by the grand total, 173, will yield the exact number in each cell of any table without ambiguity, if it is required for carrying out significance tests.

Sex.

Sixty-seven patients with melanoma were males and 106 females. This predominance of females is not to be considered of ætiological significance, but rather as an indication that economic circumstances enabled more women than men to respond to the request of the interviewer. There was some variation in the ratio by cities; thus in Sydney there were 24 males to 43 females, in Melbourne and Adelaide combined, 23 to 44, and in Brisbane 20 to 19. It has previously been noted (Lancaster, 1956) that there is a greater masculinity of melanoma death rates in Queensland than in the other States, and this is reflected in these figures for the sexes.

Age.

The age and sex distributions are given in Table I. The chief interest is in the large proportion of young persons of either sex, as compared with general clinical experience with other cancers of other sites in the body.

Birthplace and Length of Life in Australia.

Of the melanoma subjects, seven males and 10 females were born outside Australia; of the skin carcinoma subjects, six males and 10 females were born outside Australia, and among the control group of cancer subjects, nine males and 12 females were born outside Australia. Of those born outside Australia, only one melanoma patient, two skin carcinoma patients and five controls had lived for less than ten years in Australia.

Race.

All subjects interviewed were of European descent.

Blood Groups.

Insufficient data were collected to make discussion of blood groups worthwhile.

Pigmentation.

We now consider the pigmentation types of the melanoma patients compared with the patients with other skin carcinoma and the patients with other cancers or leuchæmia. In Table II are given the distributions as percentages of the types of hair colour, skin colour, skin texture and eye colour in the three types of patient. In each case the percentages will add up to 100, and the original figures can be obtained without ambiguity by multiplication by the total number, 173.

TABLE II.[1]

A Comparison of Cancer Patient Skin Types (Percentages).

Characteristic.	Melanoma.	Skin Cancer.	Other Cancer.
Hair colour:			
Black	13·9	16·8	21·4
Brown	44·5	46·8	49·1
Fair	24·8	23·1	19·1
Red	16·8	13·3	10·4
Skin colour:			
Olive	8·1	4·6	16·8
Medium	15·0	23·1	20·2
Fair	76·9	72·3	63·0
Skin texture:			
Fine	83·8	76·9	70·5
Coarse	16·2	23·1	29·5
Eye colour:			
Brown	19·7	17·3	36·4
Hazel	19·7	16·8	17·3
Blue	41·6	43·4	31·2
Green-grey	19·0	22·5	15·1
Reaction to sun:			
Red	62·4	53·8	36·4
Brown	37·6	46·2	63·6

[1] In all cases the percentages add up vertically to 100, and the original numbers can be obtained by multiplication by 173.

Hair Colour.

There is an excess of the red-haired and the fair in the melanoma patients, as compared with the other two groups. Correspondingly, there is a deficiency of the black-haired and brown-haired types in the melanoma and skin cancer patients.

Skin Colour.

There are larger proportions of the fair-skinned types among the melanoma and skin cancer patients than among the cancer controls.

TABLE III.
The Site of Melanoma and Exposure Areas.

Exposure Areas.	Sex.	Site of Primary Tumour.							
		Eye.	Face.	Arms.	Singlet Area.	Legs.	Trunk.	Unknown.	Total.
Minimal	M.	0	3	0	1	2	1	0	7
	F.	1	7	5	2	23	2	0	40
Face	M.	0	1	0	0	3	1	0	5
	F.	0	1	1	1	0	0	0	3
Arms	M.	0	0	0	0	0	0	0	0
	F.	0	7	1	1	8	2	0	19
Face and arms	M.	4	17	5	6	3	5	3	43
	F.	1	14	7	4	14	1	1	42
Face, arms and singlet area	M.	2	1	1	0	1	0	0	5
	F.	1	0	0	0	0	0	0	1
Face, arms, singlet area and legs	M.	0	0	1	1	2	0	1	5
	F.	0	0	0	0	1	0	0	1
Whole body	M.	0	1	0	1	0	0	0	2
	F.	0	0	0	0	0	0	0	0
Total	M.	6	23	7	9	11	7	4	67
	F.	3	29	14	8	46	5	1	106

Skin Texture.

Coarse skins were noted almost twice as commonly among the patients with other cancers as among the melanoma patients. It should be noted here that skin coarseness is a relative term, and we have no doubt that an English observer would have put the division between fine and coarse at a level very different from ours. Nevertheless, such an observer would also have noted a greater proportion of fine skins among the melanoma patients.

Eye Colour.

There are more light-eyed persons (blue and green-grey) among the melanoma patients and skin cancer patients than among the controls.

Reaction to Sun.

Among the general population, there is usually much discussion as to whether the individual burns easily with exposure to sunlight or whether he is able to make the appropriate adaptations and "brown". We have classified patients into those who burn, giving the red reaction of Table II, and those who do not burn so readily and give the brown reaction of Table II. About 62% of melanoma patients gave the "red" reaction, 54% of the skin cancer patients and only 36% of the patients with other cancers. We may regard the answer to this question as crucial, for it gives a summary of the efficiency of the protective measures of the skin, especially pigmentation and cornification. These five, not independent, skin characteristics have long been considered to be of ætiological importance in basal cell cancer and squamous cell cancer. Table II shows that these characteristics are of the same importance in melanoma. We shall return to a discussion of these factors later.

The Site of Melanoma.

In Table III are given the sites of the primary growth in the patients questioned. Since the sample has been selected as described above, it is not desirable to lay any special emphasis on the sites, it being preferable to refer to authors such as McGovern (1952). It might have been expected, in view of the findings concerning the ætiological importance of skin characteristics, that, depending on the area of skin exposed, the site of the melanoma would be affected. This effect is not apparent in Table III.

Exposure Areas.

The patients have been classified according to sites of body exposed. The general classification has been as follows for males: (*a*) minimal—where, although the face has been exposed, it is thought that there has not been much exposure; (*b*) face only exposed; (*c*) face and arms exposed; (*d*) arms but not face exposed; (*e*) face, arms and singlet area exposed; (*f*) face, arms, singlet area and legs exposed; (*g*) face, arms and legs exposed; (*h*) whole body exposed at some time to sun. Arms and legs are used in the sense of anatomical upper and lower extremities.

Occupational Exposure.

In Table IV, the occupational exposure of the male patients is classified according to the duration in years. Forty-seven out of 67 skin cancer patients had had more than ten years' exposure. Only 34 of the melanoma patients and 29 of the patients with other cancer had had such an exposure of more than ten years.

Exposure to the Sun in Sport.

Of the various sports, surfing and sun-bathing and fishing provide the most intense exposure to sun. Surfing and sun-bathing have a summer season, at a time when the altitude of the sun is high. Considerable areas of the body are exposed, and there is some additional dosage of radiation from the water and sand. Fishing tends also to be a summer sport, but the area exposed may be less and the fishing may be done at night; however, in general it may be taken that fishing leads to an increased exposure of the face and arms to the sun.

Fishing.

Of the 67 male patients, 44·8% of the melanoma patients, 55·2% of the skin cancer patients and 49·2% of the "other cancer" patients gave a history of fishing. The evidence

TABLE IV.
Occupational Exposure of Males to the Sun.

Duration of Exposure.	Melanoma Patients.	Skin Cancer Patients.	Other Cancer Patients.
Less than 5 years	22	9	23
5 to 10 years	11	11	15
10 years and over	34	47	29

seems to be that fishing is unimportant. A more quantitative classification may have enabled a finer comparison to be made.

Sun-bathing.

A history of sun-bathing was given by 29·9% of melanoma patients, 17·9% of skin cancer patients and 22·4% of patients with other cancers. However, here again our comparison is rather unsatisfactory.

Total Sun Exposure.

A summary of sun exposure was devised by assigning scores to a number of factors and giving a total of these scores. The factors considered were length of life in Australia, occupational exposure, industrial hazards, war service and the various sports. Table V summarizes the experience for both sexes combined. Of the melanoma patients, 26·6% had experienced what was judged to be excessive exposure to the sun, as compared with 21·4% of the skin cancer patients and 16·2% of the patients with other cancers.

Discussion of the Results of the Survey.

It is sufficiently obvious that a controlled experiment to determine whether sunlight is a factor in the ætiology of melanoma is out of the question on ethical grounds. On other grounds, we can see that there would be grave practical difficulties. First, melanoma is a relatively uncommon tumour, so that large numbers would have to be involved in any experimental or observational test of the hypothesis. Second, the results would not be available for many years. Thus we are forced to follow the alternative of clinical and epidemiological observation. A survey of this type fulfils some of the necessary criteria; we have been able to compare the characteristics of the melanoma patients with those of skin cancer patients and patients with other cancers. The survey, regarded as self-contained, has produced as good evidence for sunlight causing melanoma as it has for sunlight causing skin cancers. Similarly, it has been shown that certain types of eye colour, hair colour, skin colour, skin texture and skin reaction are more strongly represented in the melanoma patients than they are among patients with cancers other than skin, and that these types are just as frequent in melanoma as they are in patients with skin cancer of basal cell or squamous cell types.

TABLE V.
History of Sun Exposure.

Sun Exposure.	Melanoma Patients.	Skin Cancer Patients.	Other Cancer Patients.
Minimal	4·6[1]	3·5	6·4
Moderate	68·8	75·1	77·4
Excessive ..	26·6	21·4	16·2

[1] Percentages based on 173 patients in each column.

The evidence of this survey thus goes to support the hypothesis that sun exposure is important in producing melanoma, and strengthens the evidence drawn from a study of the vital statistics (Lancaster, 1956) which suggested that latitude (and so probably the ultra-violet light dosage) was important in producing melanoma.

However, we may ask why the evidence in favour of both melanoma and skin cancer being caused by exposure to light was not more definite in this clinical survey. First, melanoma is sufficiently uncommon for us not to be able to accumulate a large series. We might have been able to make comparisons on more homogeneous groups such as males, aged thirty-five to forty-four years. Second, most of the patients were born in Australia, and so the difference in total irradiation of melanoma patient and control is lessened, because both have had much the same sunlight exposure at school depending on their particular State of birth and childhood. Third, a larger series would have enabled us to study interactions between the different factors. It is obvious that there are some associations between eye colour, hair colour, skin colour and skin texture, both genetic and environmental. However, these associations do not affect the conclusions. Nevertheless, an important association between skin colour and exposure to sun probably exists; for an individual with a fair, easily burning skin, will probably not be exposed to so much sun as an olive-complexioned individual, who has no reason to fear exposure to the sun, since he does not easily burn. This association is probably responsible for making the differences in exposure between the various groups less than when they would otherwise have been.

Mode of Action of Sunlight.

The physiology of the skin and the effect of sunlight on it are by no means in a final form. We make a few comments on one of the best known surveys. On his page 490, Blum (1945) postulates that "direct injury to the cells of the epidermis by ultraviolet radiation is the crucial mechanism underlying the events enumerated above [erythema, desquamation, blistering, suntan] and that as a result of such injury the cells elaborate (i.e. produce and release) various substances which bring about specific physiological responses". He goes on to state that the basic process is damage by ultra-violet light of wave-length less than 3200 Ångström units to unconjugated protein and nucleic acid. The site of injury is the Malpighian layer. Melanin is normally in the basal cell layer, but a few days after exposure it migrates into more superficial layers, eventually reaching the corneum. Elaboration of new melanin takes place at a later stage, chiefly in the basal layer. Wave-lengths of 3000 to 4000 Ångström units produce darkening; in other words, the pigment darkening is caused by light with longer wave-length than that which produces erythema. Blum (1945) at one stage states that melanin plays only a secondary role in immunity to sunburn, and that the important factor is thickening of the horny layer. However, on the top of his page 503, he makes the following statement, which is more in line with the ideas of Australian clinicians:

> Thus, the transmission of the corneum might be altered in three different ways (a) by changes in the absorbing components e.g. accumulation of melanin, (b) by thickening, which results from epidermal hyperplasia and (c) by alteration of the scattering characteristics. As pointed out above, the first of these factors is no doubt the most important.

Blum (1945) goes on to consider the association of cutaneous cancer and sunlight. He makes a statement that "until recently, data on incidence of human cutaneous cancer with respect to geographical latitude have not been too convincing, but recent studies by Dorn (1944) indicate a clear north-south distribution". This will come as a surprise to Australian dermatologists. It may be that the effect of the sun in this respect has been so obvious that dermatologists have not felt it worthwhile to conduct a survey along classical epidemiological lines.

The findings of our survey are best summarized by stating the hypothesis that some cases of melanoma are caused by exposure to the ultra-violet light of the sun, and that some skin types are less susceptible to damage by such exposure. Melanoma tends, therefore, to occur in the fair or red-headed types with fair skin, and to be more frequent in those who have been exposed to excessive doses of sunlight.

Sunlight as a Cause of Melanoma.

Although sunlight has been generally accepted as the principal cause of squamous carcinoma and basal cell carcinoma, there has been a reluctance to admit that it may also be a cause of cutaneous melanoma. Exceptions, such as McGovern (1952), Dorn and Cutler (1954), Eastcott (1954) and Lancaster (1954) have already been cited in an earlier paper (Lancaster, 1956). Clark and MacDonald (1953) note also that the distribution of lesions varies with the geographical location, and they also note that the sun possibly has indirect actions. In view of our own inability to correlate exposure area to site of the lesion, this hypothesis appears reasonable.

Summary.

A survey has been carried out to test the hypothesis that some melanomata are caused by exposure to the sun, and that those who produce little skin pigment are more susceptible than those who do not. The survey gave results consistent with the hypothesis. The evidence for melanoma,

for which the hypothesis may be considered novel, was as strong as that for other cutaneous cancers.

Acknowledgements.

This paper is published with the permission of the Director-General of Health, Canberra. The work was carried out with the aid of a grant by the New South Wales State Cancer Council. We have been assisted by many hospitals and clinicians, but should especially like to thank Dr. A. G. S. Cooper, Director of the Queensland Radium Institute, Dr. Sylvia Bray, of the Deep X-Ray Department of Sydney Hospital, Dr. E. V. Keogh, of the Victorian Cancer Registry, and Dr. C. M. Gurner, of the Royal Adelaide Hospital.

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BRIDGES OLD AND NEW.[1]

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It is not possible for me adequately to express my appreciation of the honour and the privilege of being with you on this important occasion. The president has reminded us that this year marks the centenary of the foundation of the Perth Hospital on the present site. Exactly one hundred years ago Oliver Wendell Holmes, a philosophical physician in Boston, began to publish "The Autocrat at the Breakfast Table" in the *Atlantic Monthly*, and you remember:

> Little of all we value here
> Wakes on the morn of its hundredth year
> Without both looking and feeling queer.
> In fact, there's nothing that keeps its youth,
> So far as I know, but a tree and a truth.

Tonight we bear witness to the perpetual youth and growth of the Royal Perth Hospital, nurtured on the tree of knowledge and the truth of service.

I understand that the purpose of this week's special activities is to strengthen the bridges designed to connect the Royal Perth Hospital with the community to which it belongs; service to this community is this hospital's justification and responsibility, and without its sympathetic appreciation this hospital service could not survive. In the multiplicity and in the strength of similar bridges of understanding and goodwill must lie the salvation, not only of this community, not only of this country, but of this world. It would be fitting, therefore, that in contemplating the bridges that lie ahead we should take heart from the stirring achievements of the past.

Until 350 years ago there existed an unspanned interval between the Old World and our island continent. Who discovered Australia and built the first bridge? We do not know. But in those picturesque maps of the sixteenth century such as those of Vopelius, of Mercator and of Wytfliets, there appeared certain indications of *Terra Incognita*, *Terra Australis* or *Terra Australis nondum cognita*. Strange and bizarre as were these records and references, they were too persistent and too suggestive of portions of our coastline to have been mere figments of fancy. Who was the unknown sailor who first bore these tidings? Had he sailed south from far Cathay? Some day we may know.

The French claim that Binot Paulmier de Gonnerville landed on the west coast in 1503 cannot be established. More assured is the evidence that the Dutchman William Zanszoon in the *Duyfkin* bound for the Spice Islands passed from Bantam, now known as Java, eastward south of New Guinea and touched land early in 1606 somewhere on the west coast of Cape York Peninsula. Believing that he had encountered a southern extension of New Guinea and had been thwarted in his attempt to continue eastward, Zanszoon sailed back on his course to Bantam, naming the land *KAAP Keerweer*—Cape Turn Again—which is still marked upon our maps. No authentic documents of this diversion have been found, but the many later references indicate its reality.

There seems at times a significance in the naming of ships. Here we have the *Duyfkin*—or little dove—the symbol of peace, probably the first to touch our northern coast; we have the *Endeavour* to record the momentous voyage of Captain James Cook; and later Captain Stirling in His Majesty's Ship *Success* founded the Swan River settlement. There is, of course, the obverse. The Japanese fishing craft which floundered into the fallout from the first hydrogen bomb exploded on the Pacific coral atoll in 1954 was named *The Happy Dragon*.

To Captain Fernandez de Quiros is often given the credit for the actual determination of Australia; but a few years ago at a Sotheby's sale in London among a collection of old Spanish manuscripts from the library of Sir Thomas Phillipps there came to light a remarkable document, the *Relacion* of one Don Diego de Prado of Tovar. Although the authenticity of this document has been challenged, its genuineness is sponsored by the Hakluyt Society and by Dr. Barwick, the Keeper of Printed Books at the British Museum, and may be accepted.

De Prado was a high-ranking nobleman of ancient Madrid lineage. As second in command he sailed from Spain with de Quiros in the summer of 1603. While the Dutch ships sailed eastward round Africa to the Spice Islands, the Spaniards chose the western route, and having rounded the Horn after a series of difficulties and delays de Quiros paused early in 1605 at Callao, the port of Lima in Peru, to refit his ships. On December 21 he sailed off into the Pacific, and early in May, 1606, landed on an island in the New Hebrides group—roughly 1400 miles east of our northern coastline. This island de Quiros named *Austrialia del Espiritu Santo*, "Austrian Land of the Holy Spirit", in honour of the King of Spain, who belonged to the great Imperial House of Austria.

Here de Quiros and de Prado appear to have quarrelled, and de Prado by his own desire transferred to the *San Pedrico* commanded by Torres. De Quiros's crew mutinied and compelled him to leave *Espiritu*, the closest to Australia he ever actually reached, and return to Peru.

De Prado and Torres sailed on to Santa Cruz, where de Prado assumed command, as directed in such circumstances by the sealed orders of the Viceroy of Peru. From Santa Cruz de Prado, attempting to sail north-west to Manila, was unable to weather the east of New Guinea, and so perforce sailed westward to the south of the island. He passed into and named San Millan Bay, now well known as Milne Bay to those of the Australian Imperial Force who in 1942 first turned the Japanese southern thrust on land. Still sailing westward without intent, de Prado determined the existence of Torres Strait and the separate entity of Australia—only a few months after Zanszoon in the *Duyfkin* had narrowly missed this goal. De Prado's charts and records of this passage leave no doubt that his expedition saw and landed on the islands, and probably on the mainland about the northern coast of Cape York.

Ten years later, in 1616, James I was upon the first throne of England and Scotland, and was in fact the one and only king to come to the throne of England, having previously been James VI, King of Scotland. Soon after dawn on October 25 of that year the Dutch ship *D'Eendracht*, well out of her course from Amsterdam to the Molluccas, anchored off an unknown land. Her captain,

[1] Read at the annual meeting of the Royal Perth Hospital on September 28, 1955.

Dirch Hartichs, went ashore and wandered along the coast about the bay, but was not impressed with the sandy stretch. However, to mark his advent a tree was cut down, a post was fashioned and driven into a cleft in a rock, and a seaman's pewter dinner platter was hammered flat, stamped with a brief record of the occasion and nailed to the post. Having destroyed a tree and cast a hostage to the fortune of the future, Hartichs sailed away, possibly unaware of the bridge that he had built.

Six years later an English ship, *Trial*, was wrecked at the same place, and 46 of her complement of 136 sailed in the ship's boat to Bantam; the others perished. The same year a Dutch ship, the *Leeuwin*, sailed around the south-west promontory—giving her name to this feature, Cape Leeuwin, the lioness. Peter Nuyts sailed along the southern coast eastward of the Leeuwin, and his name still lingers in a small group of islands in the eastern bight. Gradually other Dutch ships sailed the western coast, and the maps of New Holland, as the whole country was designated, recorded their names: Witsland to the north-west, Eendracht land where Hartichs came ashore, Edels land just south of this, Leeuwin land about the cape, and Nuyts land along the southern coastal area.

Eighty-one years after Hartichs in 1697, William de Vlamingh, sailing his ship the *Geelvink* towards the Leeuwin in search of a vessel which was missing, landed on an island that had been discovered nearly fifty years earlier, and took on board some of the local pinelogs. Finding a number of what he thought were large rats, but which were almost certainly quokkas or else small wallabies, Vlamingh named the island Rottnest. Across on the mainland he found and named Black Swan River. Sailing north again, Vlamingh sighted Hartichs's grim sand dunes, and landing there, found the platter, which he removed and took on to Batavia. Later it came to rest in the State Museum at Amsterdam. Vlamingh erected a new post from the Rottnest pine on the same spot, and nailed another platter stamped with Hartichs's original inscription towards the top, adding his own below.

A little more than a hundred years later, in 1801, Captain Hamelin, sailing with a French expedition under Captain Baudin, found Vlamingh's platter half buried in the sand at the foot of a crumbling post which he took away with him, and which now rests, as you know, in your museum. Baudin nailed the platter to a new post, together with a record of his visit. In 1818, Louis de Freycinet, visiting the spot, finally removed the platter and sent it to the Institut de France in Paris, from where in 1947 it was graciously presented to the Commonwealth by the French Government. Others, of course, visited the west coast during the seventeenth century—notably Abel Tasman and Dampier, that bold English buccaneer in his stolen ship, the *Cygnet*; Dampier it was who named Shark's Bay.

But none of these were interested in what they saw of the country, and for more than seventy years, until the coming of James Cook towards the end of the eighteenth century, New Holland remained undisturbed and undeveloped; two simple pewter platters survive to span this interval of isolation.

Pewter is known as a base metal—an alloy of tin and lead—hardened sometimes with a little copper. Pewter was moulded in the early days for menial service. To me the dull grey glow of old pewter has always been a delight, and for years I have modestly collected small pieces. There is, I believe, a deep significance in the survival of these common pewter platters; that the metal is base in no way detracts from the moment of the great occasions they humbly represent. I would remind you of Dora Byron's lines:

> His cross was but of cypress wood,
> A common thing up on a tired hill,
> Desolate it stood;
> And yet its arms have reached from sea to sea,
> Arms so strong that they have set men free.

There are many instances in which base materials and coarse words have been transmuted into precious gold. When that noble little British army in 1914, bending but unbroken as it retreated from Mons before the German onslaught, heard von Kluck hurl those base words "contemptible little army", they turned at bay from the forests of Crécy, and for all time the term "Old Contemptibles" will endure as the priceless, proudest, treasured tradition of those magnificent regiments. So these broken and base pewter platters, dulled and darkened over the years almost to a black, will shine with enduring brilliance amid the bridges of our history. In your museum you may stand before the original Vlamingh platter and a faithful reproduction of the Hartichs plate, silent symbols of those early ventures beyond the safeties of the past.

On August 21, 1770, James Cook, sailing along the east coast of New Holland, anchored off a small island in the north, and hoisting the Union Jack with a salute by a firing party, claimed all that eastern portion as a British possession, which he named New Wales. After a few years this was changed to New South Wales, and as a result of the insistence of Flinders, New Holland was later renamed Australia.

For more than fifty years after Cook's visit our island was marked New South Wales, which extended from Cape York in the north to Port Phillip Bay in the south and as far west as the 135th parallel of longitude—this meridian passing south through the centre of what is now South Australia. West of this boundary was the area of New Holland discovered but discarded by the Dutch, and open for any country which chose to claim it. Certainly Captain George Vancouver watered His Majesty's Ship *Discovery* in King George's Sound in 1791, and named it in honour of George III; the inner harbour he named Royal Harbour in honour of the birthday of the Princess Royal. Vancouver claimed to have taken formal possession of an ill-defined hinterland in the name of Britain, but this does not appear to have been officially recognized at the time.

However, uneasiness as to the intentions of French ships observed about these waters persuaded Governor Darling, of New South Wales, to dispatch Major Lockyer with a detachment of the 39th Regiment to establish a settlement in the west if the area was still unoccupied, and tactfully to dissuade the French from remaining if they had landed. Lockyer found the Sound vacant, and claiming the whole hitherto unpossessed western half of Australia as under the British flag, he formally raised this emblem on January 21, 1827, at a spot at the foot of either Mount Clarence or Mount Melville. The settlement was established as Fredrickstown in honour of His Royal Highness the Duke of York, to become five years later the town of Albany.

Later in the same year Captain James Stirling, a native of St. Andrews, together with Major Moody, of the Royal Engineers, and Mr. Francis, a botanist, sailed from Sydney in His Majesty's Ship *Success* to survey the Swan River area, which had been discovered and named by Vlamingh one hundred and thirty years earlier. As a result of this survey, Stirling and Francis bore on to England such glowing accounts of the area that a plan was immediately made to persuade landed gentry with their capital and their employees to migrate to this land of promise. Mr. Thomas Peel, a relative of Sir Robert Peel, was enthusiastic about the idea, and committed £50,000 of his own capital to the venture; but alas, most of this disappeared! After some delay the British Government granted its blessing, but was not prepared to incur any expense. This has a familiar ring. However, a small convoy consisting of the *Pamela* with His Majesty's Ship *Sulphur* as escort was prepared to transport Stirling, now Lieutenant-Governor, officials, their wives and families, a number of hopeful settlers and a detachment of the 63rd Regiment, all due to leave early in 1829. In the meantime, the frigate *Challenger* commanded by Captain Howe Fremantle was ordered to proceed from her station at Cape Town ahead of this convoy.

Fremantle lay off Swan River at the end of April; but the master ran the *Challenger* on some rocks. Fortunately the ship was floated clear with little damage, and a party rowed the nine miles to the mainland. On May 2 Fremantle hoisted the flag, and pending the arrival of Stirling, claimed British possession of the whole of the west coast

of New Holland in the name of George IV, officially reaffirming Vancouver's declaration nearly forty years earlier. Early in June the *Pamela* hove in sight, and once again there was trouble, as this time Stirling's ship was driven on the rocks. Fremantle and his crew came to the rescue, no lives were lost and the ship was saved. A few days later the escort, His Majesty's Ship *Sulphur*, arrived off the coast in rough weather, and not to be outdone, her captain scraped the rocks in the passage inland. To express his appreciation of the gallant effort that had avoided disaster, Stirling gave the name of Fremantle to the site at the mouth of the Swan.

On June 18 at Garden Island, where his party had landed and had remained for some weeks, Stirling formally proclaimed the constitution prepared by His Majesty's Government. An interesting inclusion in his first constitution of Western Australia was the liability that "all male persons whatsoever between the ages of 15 and 50 were required to enrol themselves in the militia and to observe appointed days for muster and exercise under penalty of fine or imprisonment". This was one hundred and twenty-six years ago, and may well have laid the foundation of the magnificent response by this State in two World Wars.

On the King's birthday, August 12, the Governor, one lady and all the officers sailed for 12 miles up the Swan to the foot of Mount Eliza, and there in honour of the native town of Sir George Murray, Secretary of State for the Colonies, the future capital was named Perth. To quote from a letter of one of the officers present as recorded in "The Henty's":

> At half past four the ceremony commenced. Mrs. Dance, the only lady who had ventured so far up the river, was proposed by the Governor to christen the town which she did by holding an axe and the Governor guiding her hand she then gave one blow with it upon a large tree which was cut down for the purpose. The soldiers fired a volley and all present gave three cheers. The Governor made a speech upon the occasion and this ended the ceremony. After which he gave a dinner to all the officers.

Again to quote from "The Henty's":

> Some twenty years ago the late Queen Mary, pursuing her loved occupation of treasure-hunting in London curiosity shops, came across a wooden box about the size of a jewel case and bearing the following inscription on the lid. "This box was made from the tree which was cut down at Swan River in 1829 by His Excellency Sir James Stirling for the purpose of laying the foundation of the Capital of Western Australia." The box which is of she oak, maker and first owner unknown, was presented by Queen Mary to the Western Australian Government and is displayed in Perth's Public Library.

By courtesy of the museum authorities of your city here tonight I hold in my hands this beautiful box—all that remains of a bridge with that historic tree which stood until one hundred and twenty-six years ago within a few yards of this spot. You note that the inscription ignores the important role of Mrs. Dance, the only lady who "had ventured so far". This lady, who may thus have possibly inspired the many wood-chopping championships that have fallen to our Australian axemen, was the wife of one of the senior officers. The first stone of the new capital was laid on the allotment for the military barracks.

You must forgive me bringing this and many other well-known historical incidents before you; but I have again presented them as they are essential facets in the vast mosaic of bridge-building in the past. So we see the year 1829 was a momentous one in the bridge-building history of this State. Talleyrand designated England's colonies as the sheet anchor of Great Britain; and in 1829 Western Australia was officially received among the Crown colonies of His Majesty George IV and became a component of the British Empire.

To some people the word empire is repugnant and a base anathema. When we remember those empires in the past founded upon aggression, exploited and maintained by repression, these stigmata may in certain instances be reasonable. But surely an empire, such as the British Empire, developed on tolerance and justice, on the introduction of law and order, on education and self-reliance, presents nothing of shame, and the world must acknowledge the British preeminence in successful colonization. That certain former members of this Empire have under British tutelage grown to stand firmly upon their own feet and have now done so not only with the permission, but with the blessing and help of their British guardian, is not a matter of regret; it is a tremendous tribute.

Among the earlier settlers lured by the glowing reports of Stirling and Francis was James, the eldest son of the remarkable Henty family, gathered around that robust yeoman farmer Thomas Henty, of Tarring, Sussex. The Henty family chartered the ship *Caroline* of 400 tons burden, and James loaded her with servants and labourers, shepherds and stockmen, blood horses and stud merino sheep, cows and a bull, pigs and poultry, together with eight young bachelors as paying passengers seeking their fortune.

The *Caroline* sailed from Littlehampton harbour during the first week of June, 1829, and dropped anchor off the Swan on October 12. For an absorbingly interesting and informative account of the new Swan settlement I would commend the early chapters of Marnie Bassett's "The Henty's". Land in the new colony was granted to settlers in return for their capital, their stock and their farming personnel; but the areas allotted were poor land and the aborigines were a constant problem in this "scarecrow of a civilization". Trade was at a standstill—land was unsaleable. Within a year of the foundation 4000 settlers had arrived; but with the growing disappointment and distress, within two years this number had fallen to barely 1500. In spite of protests from the diminishing population, Stirling would not abandon the area and the numbers slowly rose. By the middle of the century Western Australia could muster 5000 souls. During the early years of the settlement, ways were found across the Darling Range to the richer pastures around York, and tracks were cut into the better country between the capital and King George's Sound. Other explorers, such as Roe and Grey, pushed further afield, and in 1840 Edward John Eyre completed his hazardous journey from Adelaide to Albany. In the later years of the century Gregory, Austin, Hunt, Lefroy, John and Alexander Forrest, Warburton, Gillies and others all contributed their spans to the growing list of bridges. In 1890, with the charter of self-government, the Crown colony of Western Australia, some years later than the other colonies, was granted its own responsibility as a State. At the turn of the century came the impressive bridge of Federation, with the great John Forrest of Western Australia prominent in the first Federal ministry; but for years this bridge—an obviously essential structure—was resented by many. With the development of steam and the triumphs of British ship building, the weary bridge of months by sail was reduced in the fifties to weeks; now with air travel the west is within days of Europe. In 1911 the Federal Parliament sanctioned the construction of the East-West Railway, the dream of John Forrest, and this State, which had been virtually an island weeks away from the east, became a promontory within days—and now we may slip across the aerial bridge in hours.

How came these bridges into being over the centuries? By vision, by courage and endurance, by sacrifice and hardships, and above all by great personal effort. As a result we in Australia now enjoy the greatest widespread prosperity and apparent security any community has ever enjoyed. Prosperity and security are right and just, but they never did descend to or remain with a people unless the people raised themselves towards them. We must realize that perhaps our prosperity and our security may not be so assured, and as the "Call to the People of Australia" reminds us, we may be in danger from abroad and in danger from within. Unless we in our turn continue this great task of bridge building, Father Christmas, who now calls on most days of the week, may disappear.

Wherein may be our insecurity? Let me suggest that our danger lies mainly in our apathy and our complacent acceptance of the many blessings we find around us, and in our tendency to accept the great privileges of our

citizenship, giving at times little heed to our personal responsibilities, for none of us can adequately pay for the heritage of our great possessions.

I am all for the removal of drudgery; but Heaven help us if we eliminate effort! It is a matter of wonder that while the rest of the world is working hard, as we can be assured the moment we touch land anywhere outside Australia, we have decided to devote only 40 of our 160 hours each week as a return for a reasonable reward; and let us all admit that we have a very reasonable reward. We then proceed actually to reduce these weekly working hours nearer to 30, and believe our prosperity will continue. Surely we are a strangely feckless people; and what a bridge remains to be built between fantasy and reality, and between reward and work done! The "it will do", the "good enough", the "I couldn't care less", unfortunately in some spheres are being accepted as adequate, and rank in reward and recognition with the "well done".

The only alternative to law and order is chaos. While we jealously guard our individual freedom, we must realize that this freedom is to live a way of life in conformity with the common good, and within the laws that we ourselves have made through our elective form of government.

Mr. Alex Duncan, until recently the Chief Commissioner of Police in Victoria, tells the story of an immigrant to America who wandered up Fifth Avenue in New York and met a policeman. "They tell me this is the land of the free", said the immigrant. "It sure is that, my lad", replied the policeman. "Hurrah", said the man, "I've wanted to do this for years", and hit the policeman fairly on the nose. The usual procedure promptly followed, and the man was run into the station bitterly complaining that he had been assured he had arrived in the land of the free. "Yes", said the policeman, "but your freedom ends where my nose begins."

And that about explains it all.

If we are not prepared to abide by the rules, then by all means let us go elsewhere, as we are perfectly free to do, where the rules are different or as devised by Mr. Rafferty. But we must learn not to be an annoyance to those who choose to live according to the law of the land. We think we are law-abiding citizens, and in the bigger things I believe we are; but we do take some short cuts. In London with its 10,000,000 people, narrow winding streets and teeming traffic one seldom sees a dented or a scratched mudguard among those law-abiding, well-mannered, considerate people.

But we in Australia—well! I know it is always the other fellow who is responsible, but how are the mudguards of your car? I know mine bear scars from broken rules. Certainly I believe that the further west we journey in Australia, the more road decency and courtesy we encounter. I refer rather to my own State of Victoria, where the weekly rate of killed and wounded on the roads is a terrible reproach. We have too many louts at large, No decent community can continue unless there is a firm bridge between the citizens and the laws they make, and no individual is too young to learn to conform to our accepted social laws.

Have we firmly spanned our daily relationships with our fellow men? Do we always admit the other man's right to those considerations we demand for ourselves? Or do we seek at times to get as much from him as we can manage to wangle, leaving the golden rule, as we leave so many other precepts, to be practised by the other fellow?

How far have we bridged the gap between fear and fortitude? "Fear", said Bernard Shaw, "is the mainspring of war"; and this is a typical Shavian generalization with a germ of truth. How many of our decisions are determined by what we imagine others would think of us rather than by what we know to be right? Hot, impetuous bravery is by no means rare; but the cold courage of conviction, the lonely moral courage of a minority, undaunted by hostility, is precious and commands respect. Popularity would be pleasant, but honesty is high. Although promotion and preferment may follow an effortless acquiescence, they are no substitute for self-respect.

You are about to build an important bridge within this community by the establishment of a medical school. Here you have a magnificent opportunity; and having studied the splendid report of the planners who laid the foundations for this school, I believe you will grasp this opportunity in a brilliant, inspiring manner.

We are on a wave of inquiry concerning medical education, and you will be in the position to bring medical education in your new school from its foundations more in line with what is worthy in the changing face of medicine. Change is certainly a manifestation of movement, but not always of advance. The worship of the untested new may lead at times to distress and to waste in the later discard of the useless, and waste is always abhorrent. I trust that in your school will be preserved those basic principles which enhance the practice of a profession, but which may tend to be lost in the plying of a trade.

May I submit a plea for the presentation, during the course, of the thrilling history of medicine? Without a knowledge of its development over the ages I believe that no medical student can fully appreciate his art.

You will always find more sparrows than birds of paradise in the trees; so will the standard of general practice rather than the specialties determine the quality of medical service within a community. I hope that you will include sound general practitioners among your teaching staff, and that each student or recent graduate will be associated for a reasonable period with a general practice where not only knowledge but wisdom and human understanding are constantly demanded, and where not only treatment but management is required.

The answer to the growing demand for bigger, better and more expensive hospitals in any community lies most surely in the development of social medicine, a study of the environmental factors in disability and disease designed for their prevention and the maintenance of positive health. Is there any country in the world where the God-given gifts of health and well-being are so bountiful as in Australia? And do we not rather take them for granted? It is significant that there is now only one school of public health or social medicine in Australia. There is not one subject in the medical curriculum to which this study may not be constructively applied as it is by Professor Crewe in Edinburgh. The medical pride of a community must rest, not upon the number of its modern hospitals, but rather upon the scanty need for them.

From the generally accepted undergraduate medical education could well be culled the present smatterings of certain specialties which should pass into and be developed within the post-graduate field; then time and space would be found for the wider education of your medical students. I believe the primary aim of a medical school should be to equip the students for the general practice of medicine with a pride in and an appreciation of service to the community, and at the same time to inspire those who are fitted to pursue later a higher study and qualification in one or other of the special spheres of medicine.

What a magnificent contribution to bridge building you are making, and others throughout Australia are making, since these Asian students have been coming among us! I believe this hospital was the first in Australia to secure Asian student nurses. Before this plan, such was our insular narrowness that these visitors were often the objects of inquisitive and ill-mannered scrutiny. Nearly 4000 have come to Australia, and we realize the privilege of their presence. I trust that with this realization there will be engendered among us all a goodwill, building a powerful, enduring bridge of mutual understanding, respect and appreciation.

The more we look around us in the light of history, the more we realize the grand bridging that has been achieved and is being achieved today. One hundred years ago the lot of many, even in our own country, was unhappy and uncertain. Ill health and insecurity of occupation did not foster a feeling of safety. Today all this has been changed in Australia, where now no able-bodied and willing person need fear the future; but for millions of

people within one day's air travel of our country life is hard beyond belief, and each of us, counting our many blessings, must feel moved to tender our humble contribution to the bridges that lie ahead between those of us who have so much and those other human beings who have so very little. I wonder if we fully realize the great international contribution of such activities as the United Nations, the Red Cross, Rotary, the Country Women's Association, the Travellers' Aid Society, the Boy Scouts and Girl Guides' movements and the great brotherhood of sport. Nor must we ever forget the many splendid voluntary activities quietly and effectively carrying out their social services within our community.

The "Call to the People of Australia" again reminds us that in the development of a true community among ourselves and all people of goodwill lies the one way to peace at home and abroad. Because we still need firmer foundations in the spans between faith and apathy, sympathy and intolerance, trust and suspicion, greed and generosity, money and value, our world today is sadly uneasy, and this presents to every one of us a profound challenge; but in meeting the challenge of history peoples grow in greatness, and never have the people in this State been reluctant to meet a challenge.

It has been my privilege to serve alongside units from Western Australia in two World Wars. It was often the duty of these units to carry out some of our toughest tasks in battle, and in bridging the gap between defeat and victory they made great and sometimes inordinate sacrifices.

All they had they gave—
Themselves they scorned to save.

This afternoon I stood before the Grove of the Unforgotten, set among the quiet woods and glowing wild flowers of Araluen, and as a citizen of Australia let me pay my sincere tribute to the example of those splendid units and to their spirit, which was an inspiration in two world wars.

I wonder if we have realized the wealth of wisdom that underlies many of those nursery rhymes which we learned first at our mother's knee, and which we in turn have revived with each succeeding generation. I should like to conclude this address by reminding you of the challenging domestic problem that beset a man and his wife, and of how this problem was presented and solved in four simple lines of one of the very old nursery tales. The question, you remember, could not be solved by either of the partners working apart, as is simply stated in the first two lines and then finally when they pulled together as a team the answer was simple. So, surely, must it be with all our problems. We need not only one or a few persons, but all individuals, to make their great or their humble contributions, striving together towards a common goal, disregarding their little differences as did Mr. and Mrs. Spratt. And so, such are the ever-revolving cycles in our lives, we have returned once again to a simple platter and, knowing the antiquity of the jingle, I feel sure one of pewter. Will you please ponder upon the profundity of the following?

Jack Spratt could eat no fat,
His wife could eat no lean;
And so, betwixt them both, you see,
They licked the platter clean.

MEDICAL PRACTICE IN CENTRAL NORTHERN TERRITORY.

By R. C. Webb,
Medical Officer of Health, Northern Territory, Darwin.

This article is based on impressions gained during the period from October, 1953, until January, 1956, when as a member of the Northern Territory Medical Service, I was medical officer-in-charge of the Tennant Creek Hospital. The hospital was divided into two sections—namely, a native ward of 12 beds and the main hospital section with 20 beds for the white and half-caste population (a maternity ward has since been completed providing additional beds). The nursing staff at the hospital consists of a matron and five double certificate sisters. There is no untrained or part-trained staff. Close liaison exists between this hospital and other hospitals in the Northern Territory —namely, Darwin, Katherine and in particular Alice Springs.

Population and Distribution.

Tennant Creek is a mining town situated on the Stuart Highway 315 miles north of Alice Springs and 639 miles south of Darwin on a latitude of 19·6°. The area served from Tennant Creek is large and sparsely populated (Table I), extending north some 180 miles and south for 150 miles (including cattle stations adjacent to the Stuart Highway). In an easterly direction the medical service extends over 200 miles along the Barkly Highway, taking in the Barkly Tablelands cattle stations which are mainly to the north of the highway, and also to the south, the Hatches Creek area. There is no habitation to the west, the country being particularly barren and classed as semi-desert (Figure I).

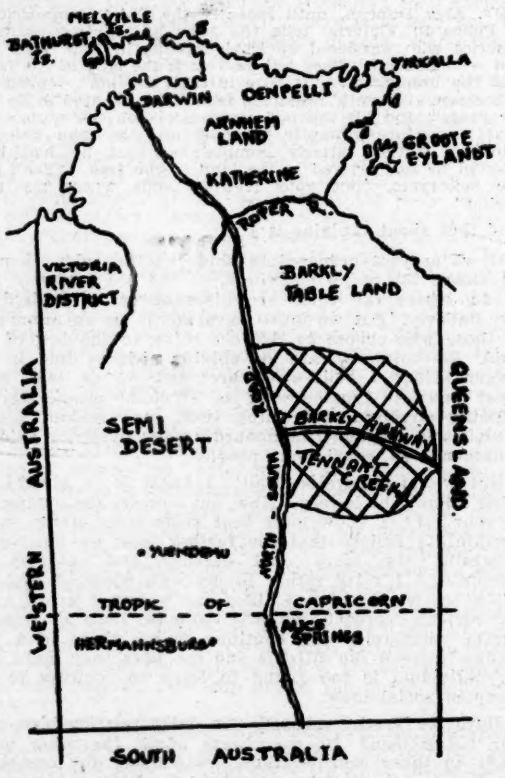

Figure I.

The figures given in Table I are approximate only and compiled with the aid of a census conducted on June 30, 1954. Since that date there would be some increase in the figure for the European population in Tennant Creek, all other figures being approximately the same.

There are twice as many males as females amongst the European population throughout the Tennant Creek district. This applies both in the town itself and in cattle stations and other outlying areas, where small groups of from two to three and up to 60 people are found.

With the native population the sex ratio is approximately equal. Only four aborigines usually live in Tennant Creek

(two married couples employed by the hospital and the police respectively). The largest congregation is at Phillip Creek (approximately 230). This is a native welfare settlement 30 miles north-east of Tennant Creek, with full blood aborigines of the Warramunga and Wailbri tribes. The water supply is insufficient for their needs, particularly in low rainfall years. These natives are being transferred to another settlement built on model lines over 120 miles to the south, where an abundant supply of bore water has been found. This settlement will be known as Warrabri from a combination of both tribal names. The native population fluctuates, a large number of active males being employed during the droving season by cattle stations north, north-east and south-east of Tennant Creek.

TABLE I.

Population.	Tennant Creek and Phillip Creek.[1]	North and North-East.	South and South-East.	Total.
European (including half-caste)	920	340	140	1400
Aboriginal (full blood) ..	230	620	150	1000
Total	1150	960	290	2400

[1] Less than 10 aborigines reside in Tennant Creek and less than 10 white persons at Phillip Creek.

Medical Communication.

The majority of these outlying areas are also served medically by the Flying Doctor Service networks centred at Cloncurry (Queensland) and at Alice Springs. This service consists of advice at regular intervals throughout the day when isolated communities can converse directly with the medical practitioner by means of the Traeger transceiver.

Settlements adjoining the main highway have telephones installed and may communicate directly with Tennant Creek.

This large district is covered by motor ambulance stationed at the Tennant Creek Hospital, and when necessary by aerial ambulance, which is stationed at Alice Springs, but can be diverted to this area.

The following is an example of the coordination of these different means of communication.

In February, 1955, a medical call was received in Alice Springs through the Flying Doctor Service concerning sore throats in some natives located at Muckadee Station, 80 miles north of Tennant Creek. (This small station had no telephone, but a Flying Doctor Service transceiver.) The medical officer at Alice Springs who took the call, considering the possibility of diphtheria, telephoned the medical officer at Tennant Creek, who sent out a motor ambulance to transport the family to the Tennant Creek Hospital. This was effected within three hours of the medical message. Diphtheria was suspected clinically and later confirmed by positive findings on examination of throat swabs. As this native family had visited other stations, the danger of spread of infection was enhanced. All native settlements within a radius of 150 miles were immunized against diphtheria. The medical aircraft stationed at Alice Springs was utilized to perform immunizations at Barkly Tableland stations with much greater speed than would otherwise have been possible.

Climate.

Generally the climate is hot and dry. At Tennant Creek the average rainfall is 14 inches per year, of which 12 inches fall in the five months' period November to March inclusive. There is a low relative humidity, from a normal mean reading of 28% in October to a normal mean reading of 50% in February. The normal mean maximum temperature is highest in December (99·8° F.) and lowest in July (75·4° F.); the normal mean minimum temperatures for these two months are 75·5° F. and 51·1° F. respectively. However, it is not uncommon to have many days in succession with a maximum temperature of 110° F. or higher in December, January or February. Dust storms are frequent; strong winds, most severe in the mornings, are almost habitual in the winter months. Further north the rainfall, humidity and temperature are all higher, whilst south of Tennant Creek the reverse is true.

Disease Incidence.

The central population of this area appears to be increasing, as is evident by the number of out-patient consultations. In the first half of the two years from October, 1953, to October, 1955, there were approximately 4000 out-patient consultations; in the second half of that period there were over 5000 consultations.

There has been no significant increase in the number of in-patients, there being 727 for the two-year period (mid-October, 1953, to mid-October, 1955). These admissions have been divided into 14 disease classes, and the percentage of each group of diseases has been calculated (Table II). These figures have been compared with

TABLE II.

Hospital Admissions, 1953 to 1955 : Tennant Creek.

Disease Group.	Number of Cases, Tennant Creek.	Percentage.	Percentage in Liverpool, 1938.	Percentage Difference.
1. Accidents and injuries	125	17·2	5·8	+11·4
2. Skin	101	13·9	9·0	+4·9
3. Digestive system ..	86	11·9	14·0	−2·1
4. Respiratory system ..	69	9·6	12·3	−2·7
5. Circulatory system ..	41	5·6	7·8	−2·2
6. Genito-urinary system	18	2·5	6·0	−3·5
7. Musculo-skeletal system	22	3·0	3·0	—
8. Nervous system[1] ..	30	4·1	8·7	−4·6
9. Obstetrical	75	10·3	4·3	+6·0
10. Influenza	56	7·7	14·4	−2·7
11. Infections (including tropical)	29	4·0		
12. Eyes and ears ..	25	3·4	14·7	−4·5
13. Climatic nature ..	25	3·4		
14. Others	25	3·4		
Total	729	100·0	100·0	—

[1] Including mental states and alcoholism.

admissions to Liverpool Municipal Hospital in 1938, this being the only list of similar disease classes available (Frazer and Stallybrass, 1946). Whilst it is realized that this comparison is not strictly valid, owing to difference of climate and a fifteen-year interval, it is included for interest and not as a standard of incidence of diseases.

It is proposed to discuss various items arising from the hospital admissions.

Accident and Injury.

The percentage of admissions due to accident and injury (17·2) is considered high. The main reason is the presence of the surrounding mines with rebuilding and enlargement projects, many being too small for organized supervision; coupled with this factor, a number of people of lower than average intelligence (many of whom are alcoholics) always appear to be attracted to such mining communities. The actual percentage of diseases of the nervous system and mental states including alcoholism (category 8) does not appear unduly high; however, many unstable persons are examined in the out-patient department, and the majority of alcoholics were not admitted to hospital.

Diseases of the Skin.

A wide range of skin conditions is encountered. Prominent amongst these is cellulitis, particularly in the lower extremities. The history is usually one of a neglected laceration which has become infected. Erysipelas, which in many places is nowadays a rarity, is seen to a lesser extent. Despite the hot climate, sunburn is uncommon. Many labourers work in shorts only and are "hardened" to the excessive heat.

Chemical dermatitis is often seen, and the patients, who are invariably working at mines, present with what they term "cyanide rash"; but the cause is usually the lime which is used in the plant processing at most mines. Many skin lesions are difficult to diagnose, owing to the superadded infection and the time which elapses before presentation at hospital; this last reason, of course, is mainly evident only in those who live some distance from the township.

Acne vulgaris corporis is not infrequent amongst underground miners and it does not respond readily to usual therapy, due to the desire to continue their occupation.

Scabies is common and is almost invariably confined to the aboriginal and half-caste population. These patients are not usually admitted to hospital, as they respond well to the application of benzyl benzoate or sulphur ointment.

An interesting condition is that of the red-backed spider bite (*Latrodectus hasseltii*). Seven patients were admitted to hospital during the two years; but many other cases occurred, some of a less severe nature, and others in outlying districts, so that the patients were not brought into hospital. The typical appearance is of an area of erythema up to half an inch in diameter, with severe pain radiating in a proximal direction from the bite. The greatest success was obtained by the use of calcium gluconate (10 millilitres given intravenously), and some relief of pain was afforded by pethidine. No relief from pain was experienced by the use of morphine or from antihistamine drugs (systemic and oral administration used), except in minor cases and those of doubtful origin.

Pityriasis versicolor (*tinea versicolor*) is common in the native population. The so-called café-au-lait appearance is most frequently confined to the upper part of the trunk, and this is clearly noticed in the aboriginal (Roxburgh, 1950). The infrequency of washing and changing of clothes, together with the transfer of clothes from one person to another, is the probable explanation of the large number of cases seen. This condition is to be borne in mind in the consideration of the hypopigmented lesions of simple macular leprosy (Cochrane, 1947). In the aboriginal, *tinea versicolor* practically never invades the face. The characteristic fungus can be demonstrated microscopically from skin scrapings.

General Systemic Diseases.

With regard to general systemic diseases, no great difference from general practice elsewhere is experienced. However, rheumatic fever appears to be more common, particularly amongst the native population (four aboriginal patients with acute rheumatic fever were admitted to hospital). There is much evidence of adults with established mitral stenosis, and this would be a general finding throughout the Northern Territory wherever aborigines are examined.

Another condition, seen more frequently than one would expect, is renal colic. Thirteen patients with typical renal colic were admitted to hospital, all with red blood cells in the urine. Many of these came from outlying areas and appeared almost invariably on hot summer days. In some instances, patients had travelled from one station to another with a limited fluid intake. Intravenous pyelography often failed to reveal calculi or any abnormality of the renal tract. Most relief was obtained from pethidine (100 milligrammes given intravenously, and slowly).

Pulmonary Tuberculosis.

Eight patients with confirmed pulmonary tuberculosis were admitted to hospital (seven European and one aboriginal). All were adults, the majority past middle age with extensive lesions. Five patients had been engaged in mining for many years, usually as individual prospectors; two of these had associated silicosis.

In October, 1954, a tuberculosis survey was conducted. Preliminary Mantoux tests were carried out amongst school children, both white and aboriginal. The results are given in Table III. There was a much lower percentage of positive results than one would expect, in view of the results of other Mantoux surveys in the Northern Territory (Watsford *et alii*, 1956).

All "Mantoux-positive" children were radiologically examined, together with as many people in the vicinity as could be persuaded by a voluntary campaign.

TABLE III.

Mantoux Tests: Tennant Creek School Children, 1954.

Race.	Number Tested.	Negative Result.	Positive Result.
White (including half-caste) ..	90	85	5 (5·6%)
Aboriginal	52	51	1 (1·9%)
Total	142	136	6 (4·2%)

The results are listed in Table IV. No cases of pulmonary tuberculosis were found, but several cases of silicosis and cardiac enlargement were detected. These results may have been contributed to by the routine medical and X-ray examination of all miners on the commencement of their employment at the mines. This was followed up by regular chest X-ray examinations at six-monthly intervals. Unfortunately, in the absence of legislature for compulsory X-ray and medical examination of all miners employed in this area, the efficacy of this procedure is lessened.

Obstetrical Conditions.

Obstetrical cases were in good proportion to the population. Almost all deliveries were among white people, with a lesser number of part aborigines. Very few full blood aborigines came to hospital for confinement. Those who did were usually sent from small establishments which did not want the responsibility in case of complications. The native woman has her baby with ease in her normal environment, use being made of the squatting position and of the native midwife, who exerts pressure on the abdomen with her foot should labour be prolonged.

TABLE IV.

Chest X-Ray Survey: Tennant Creek, 1954.

Race.	Number of X-Ray Examinations.	Cases of Tuberculosis Detected.
European	397	Nil
Aboriginal	115	Nil
Total	512	Nil

Influenza.

Influenza occurs in small epidemics and is common amongst the native population. It appears early in the wet season after the first rain, but is not a serious disease. No deaths have been notified; this fact is probably associated with the higher state of nutrition existing in the local tribes.

Infectious Diseases (Including Tropical Diseases).

The common infectious diseases are seldom seen. A small outbreak of diphtheria has been referred to earlier. Occasional epidemics of whooping-cough are seen amongst the native population. These are becoming less frequent owing to the administration of triple antigen to the aborigines. Infective hepatitis is more common than one would expect considering the population—seven patients were admitted to hospital in the two-year period.

Malaria, ancylostomiasis and amœbiasis are not present in residents of this part of the Northern Territory. Only three patients with proven leprosy were admitted to hospital prior to transfer to the leprosarium at Darwin.

Humphry (1952) states that leprosy is endemic throughout the northern tropical portion of the Northern Territory —that area lying to the north of the nineteenth parallel of latitude. These three cases were from northern and north-eastern parts of the Tennant Creek district. The nineteenth parallel passes 45 miles north of Tennant Creek.

Framboesia (yaws) is relatively common. Eleven patients were admitted to hospital; many others were treated outside. The lesions seen most frequently are the initial framboesioma (primary sore or mother yaw) and the papillomatous framboeside (daughter yaw). Cases of lupoid framboeside associated with shiny atrophic skin and pigmentary changes and sabre tibiæ are abundant, whilst gangosa is seen to a lesser extent.

Trachoma is a common condition amongst the aborigines and will be referred to below.

Eye Diseases.

Eye infections are extremely common, but of course only a small percentage of affected patients were admitted to hospital. Paramount amongst these conditions is purulent ophthalmia (11 cases). It is a severe form of mucopurulent conjunctivitis due to the Koch-Weeks bacillus. It is more common by far amongst the white population, particularly the fair-haired, blue-eyed children, many of whom appear to be very susceptible.

The condition known popularly as "bung eye" or "fly eye" is frequently seen in the out-patient department. This is due to a fly bite, with acute œdema of the lids, particularly the upper, and usually accompanied by chemosis. Castor oil rubbed on the lids and around the eyes has been found to be effective as a preventive measure.

Trachoma has a high incidence in the native population —82·5% in the Phillip Creek area and 77% in the natives at Newcastle Waters. These percentages are a true indication of the incidence of trachoma in this region. Detailed tables have been prepared in accordance with World Health Organization recommendations showing the incidence in 10 age groups. It is intended to publish these later, together with figures for many other regions, in an article entitled "Trachoma in the Northern Territory" (Flynn and Webb). Brief details only are included here (Table V) for the Phillip Creek area.

TABLE V.

Trachoma Incidence: Phillip Creek.

Group.	Examined.	Affected.
Pre-school children	17	11 (64·7%)
Female school children	21	17 (81·0%)
Male school children	33	27 (81·8%)
Female adults	64	58 (90·6%)
Male adults	54	43 (79·6%)
Total	189	156 (82·5%)

Clinically, trachoma has been classified into four groups (Mann, 1954), as follows:

A. Active trachoma.

B. Trachoma healed with good sight.

C. Trachoma healed with impaired sight.

D. Blind from trachoma.

In many patients, particularly the older children and younger adults, follicles, inflammation and scarring coexisted. It therefore appears necessary to subdivide the "active" group into the following two stages: (i) active trachoma with scarring (AB); (ii) active trachoma without scarring (A). Six patients blind from trachoma were examined, all these aborigines being aged over fifty years. The severity of trachoma is associated with the frequency and degree of secondary infection.

Climatic Diseases.

Included in the group of climatic diseases are malnutrition, dehydration and heat exhaustion. The first two of these are usually confined to the children of aborigines living in small communities, who have been neglected by their parents or have been weakened by gastro-enteritis. These conditions occur on their annual walkabout after the wet season has finished. Heat exhaustion, and to a lesser extent heatstroke, are generally found in middle-aged to elderly white tourists passing through or visiting the town in the very hot summer months.

Acknowledgements.

The permission of the Director-General of Health, Dr. A. J. Metcalfe, to publish this article is acknowledged. Thanks are due to the Commonwealth Director of Health for the Northern Territory, Dr. A. H. Humphry, for encouragement.

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SEROLOGY OF A STRAIN OF RICKETTSIA AUSTRALIS ISOLATED IN SOUTH-EAST QUEENSLAND.

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IN 1955, Pope isolated a rickettsia from a patient, J.C., with a clinical diagnosis of tick typhus. He identified it provisionally as *Rickettsia australis*. We now describe the production of an antigen from the J.C. strain for use in the complement fixation test, and its serological comparison with the PHS strain of *R. australis*, sent by Dr. J. E. Smadel, of the Army Medical School, Washington, United States of America.

Production of Antigens.

The J.C. strain was isolated by Pope (1955) from the blood of a patient who had been bitten by a tick at Mount Tamborine, a tourist resort about 50 miles south-east of Brisbane.

The PHS strain was isolated by Andrew *et alii* (1946) from a patient in North Queensland, and sent to the United States for further investigation. Plotz *et alii* (1946), and Lackman and Parker (1948), concluded that it was a new ætiological agent within the spotted fever group, and it is now known as *Rickettsia australis* Philip.

Funder and Jackson (1946) have described the production of a complement-fixing antigen from rickettsiæ grown in the yolk sacs of developing chick embryos. This was an adaptation of one of three methods described by Topping and Shepard (1946). Lackman and Parker also used this method when they compared the PHS strain with other rickettsiæ. It gave poor results in our hands, some antigens fixing complement with normal serum, while others were too weak to use. Finally, the method of choice was found to be that used by the Rocky Mountain Laboratory of the United States Public Health Service for preparing Rocky Mountain spotted fever antigens. This also is a variation of one method of Topping and Shepard, and

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was given to Dr. E. H. Derrick of this institute while he was on a visit in 1950. Because it has regularly given good antigens and we have not seen it recorded elsewhere, a detailed description is given below.

The J.C. strain of rickettsia was maintained by Mr. J. G. Carley by twice-weekly passage in the yolk sacs of seven day old chick embryos. Additional eggs were inoculated when needed for making antigen. Incubation was carried out at 35° C. A few eggs died after three days and were discarded, but those that died on the fourth day after inoculation were allowed to stand at room temperature for another twenty-four hours before harvesting. The yolk sacs were then emulsified in a "Waring Blendor" with 10 millilitres of 0·2% formal saline for each sac, and the emulsion was placed in the refrigerator overnight. Next day the pH was adjusted to 5·5 to 5·8 with normal hydrochloric acid, and the material centrifuged at 4300 revolutions per minute for one hour in an "M.S.E. Medium" angle-head centrifuge. The supernatant fluid and yolk were discarded, and the sediment was suspended in one millilitre of saline for each original yolk sac. This suspension was placed in a separating funnel and shaken with twice its volume of ether, and extraction proceeded overnight in the refrigerator.

Next morning the bottom aqueous layer containing the rickettsiæ was carefully removed and kept, and a second quantity of saline, one millilitre to each yolk sac, was shaken with the remaining ether and emulsion layers. This was allowed to separate for five hours in the refrigerator, and the resulting aqueous layer was removed and pooled with the first. The ether and emulsion layers were then discarded. As some debris often ran off, it was sometimes necessary to shake the aqueous material with a small quantity of fresh ether. Separation of the layers then occurred in a few minutes, the debris remaining at the interface. After it was run off, the aqueous layer was centrifuged for a few minutes at about 750 revolutions per minute to throw down any remaining impurities.

At this stage the residual ether could be removed in a vacuum, and the product used as a crude antigen. It contained rickettsiæ, a soluble antigen from the rickettsiæ, and dissolved yolk sac material. As the soluble portion was found to be responsible for false positive reactions, only the washed organisms were used for the antigen. The crude antigen was centrifuged in a "Spinco" Model L Ultracentrifuge at 7000 revolutions per minute for thirty minutes in the cold. The supernate was discarded, and the washed organisms were suspended in one millilitre of saline for every original two yolk sacs.

The product was shaken vigorously with glass beads before use, to break up clumps of organisms. It had the appearance of a bacterial suspension, and smears, when stained by Giemsa's method, were seen to contain large numbers of rickettsiæ and practically no debris.

Experiments showed that eggs harvested soon after death gave a negligible yield of antigen. The success of the method described seemed to depend on allowing the eggs to remain on the bench for twenty-four hours before they were harvested.

Yolk sacs from normal eggs were treated in the same manner, to make a control antigen, but after removal of debris with ether, a clear solution remained. When it was centrifuged at 7000 revolutions per minute for thirty minutes, no particulate material was deposited, so normal antigens were not prepared after the initial experiments.

Complement Fixation Tests.

Complement fixation tests were carried out by the method of Lennette *et alii* (1949). It was found convenient to use complement preserved with the boric acid-sodium acetate mixture of Campbell and Turner (1953), and sheep blood taken into the glucose-citrate-"Merthiolate" solution of Stubbs (1953). Preserved complement was usable for two weeks, and the sheep blood for two months. New batches of antigen were titrated in "checkerboard fashion" against the serum of a guinea-pig, which had been inoculated with the J.C. strain and bled after an interval of three weeks. Usually, a 1:2 and sometimes a 1:4 dilution of the original rickettsial suspension gave optimum complement fixation. The antigen was kept in the refrigerator, and one batch was still undiminished in titre nine weeks after it had been made.

The specificity of the J.C. strain antigen was shown by its reaction with the serum of patient J.C. and immune guinea-pig serum, but not with murine typhus, scrub typhus, and "Q" fever human convalescent sera. Plotz *et alii* (1946) showed that an antigen prepared from the PHS strain of *R. australis* did not react with the serum of guinea-pigs convalescent from epidemic and murine typhus, South African tick bite fever, *fièvre boutonneuse* and Rocky Mountain spotted fever.

Comparison of J.C. and PHS Strains.

Antigen was made from the PHS strain of *R. australis* by the method described above, and after titration against homologous serum, cross tests were made with the J.C. strain and serum. As Table I shows, the J.C. serum and the PHS serum gave the same titre with each antigen.

Table I.

Complement Fixation Cross Reactions Between J.C. and PHS Strains.

Serum.	Reciprocal of Titre.	
	J.C. Antigen.	PHS Antigen.
J.C. guinea-pig	128	128
PHS guinea-pig	256	256

Cross protection tests were also carried out in guinea-pigs. Eight animals were inoculated with 1·0 millilitre of 10% yolk sac suspension of the J.C. strain, and eight with an equivalent dose of the PHS strain. The temperature and scrotal reactions of all animals were observed. After one month, four of each group were challenged with the J.C. strain, and the other four with the PHS strain. Each strain was inoculated at the same time into control animals, and all were observed for temperature and scrotal reactions.

All eight guinea-pigs of the J.C. series developed positive reactions—namely, visible scrotal swelling and inflammation and fever. Four of these did not react when challenged with the PHS strain one month later. The other four animals also failed to react to a repeat injection of the J.C. strain, but four new control animals gave a positive reaction.

Six of the eight guinea-pigs inoculated with the PHS strain gave a positive reaction, one died, and one showed no visible reaction. When four were challenged after one month with the J.C. strain, one gave a positive reaction. This was the animal that did not react to the initial injection, and it may be presumed that it did not then receive an infective dose. The remaining three showed no reaction when challenged with the PHS strain, but four controls developed scrotal reactions and fever.

These results supply further proof that the rickettsia isolated from the patient J.C. was a strain of *R. australis*.

Summary.

The strain of rickettsia isolated from patient J.C. has been shown by serological and protection tests to be identical with a known strain of *R. australis*. A satisfactory method has been developed for preparing rickettsial suspensions for use in the complement fixation test.

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Reviews.

Handbook of Histology. By Karl A. Stiles, M.S., Ph.D., with an introduction by Melvin H. Knisely; Fourth Edition; 1956. New York, Toronto, London: McGraw-Hill Book Company, Incorporated. 9" x 6", pp. 253, with illustrations and tables. Price: $3.00.

THIS is the fourth edition of a book formerly entitled "Handbook of Microscopic Characteristics of Tissues and Organs". In an enthusiastic preface the author claims that it can be, and indeed has been, used as a laboratory manual, as a syllabus for lectures, as a basis of review, or as a "cram" book for rapid preexamination revision.

The material is presented as a tabulated summary of the characteristics of the main tissues and organs with an almost exclusive emphasis on ensuring their speedy recognition, or as the foreword puts it, "to assist in the rapid learning of basic-phrase-plus-picture concepts".

In this limited objective the book is successful, and it would be valuable as a preexamination "crammer"; despite the other claims in the introduction, the presence of tables of readily confused tissues and similar features suggests that this is its real purpose. Some of these seem far-fetched —it would indeed be difficult to confuse liver and kidney or fat and thyroid.

The book is clearly printed without illustration other than line diagrams. This method, the author states, is favoured by most instructors in histology. Many blank pages are provided for the student's diagrams or notes.

A Text-Book of Mental Deficiency. By the late A. F. Tredgold, M.D., F.R.C.P., F.R.S. (Ed.); Ninth Edition by R. F. Tredgold, M.D., D.P.M., and K. Soddy, M.D., D.P.M.; 1956. London: Baillière, Tindall and Cox. 8¾" x 5½", pp. 496, with illustrations. Price: 40s.

THIS is the ninth edition of a well-known work which is the standard text-book on mental deficiency. Although it was first published in 1908, there can have been few advances in ætiology or treatment even over the period of forty-eight years in this particular aspect of psychiatry. It is therefore a tribute to the value of the book that so many editions should have proved necessary. The original author has died, but the work is being carried on by his son, R. F. Tredgold, with the assistance of K. Soddy, a lecturer in the Medical School of University College Hospital, London. The publishers suggest that much of the book has been rewritten "in the light of the recent research and the recent changes in psychological theory". One may be forgiven for asking what part "psychological theory" plays in mental deficiency. Strangely enough, too little attention is paid to one aspect of recent research, that of Norman Gregg into the relationship between maternal rubella and mental defect. Once again, as in the last edition, this is dismissed in a few almost disparaging lines as a matter to which "some notoriety has been given". A recent report from the United States of America states that this condition in the mother results in stillbirths in 15% of cases and in congenital abnormalities in 15%. Surely this would put it in a class worthy of serious consideration. Apart from this, there are a few innovations, such as sections on the defective's relations with his family, the sociological aspects of the problem and psychoses in childhood. With regard to the last, the somewhat novel suggestion is made that "it is best to approach this subject free from preconceptions derived from the study of adult psychiatry". Presumably this means that the less is known about psychiatry, the better the patient's prospects. There may be a germ of truth in this rather unusual attitude, for it is possible to obfuscate the obvious with too much academic knowledge. The term "amentia" is used much more freely in this than in previous editions. It is debatable whether this is desirable or not. It conforms with custom on the Continent, which may be an advantage. On the other hand, some members of an older school of psychiatry still use it in its literal sense of mindlessness and apply it to various forms of mental deterioration arising from disease, age or injury. However, this is a minor point. As before, the whole range of mental deficiency is more than adequately covered within the five hundred pages. It is impossible to think of any omissions. A gratifying feature is the emphasis placed on the potentiality for mental development in the case of "spastics". It is not so long ago that every sufferer from this disorder was cursorily dismissed as a "spastic diplegic idiot". Nowadays we find quite a number of them reaching university standard. For the morbid-minded there is quite a collection of the more gruesome types of illustration of mental defectives. This is a comprehensive and conscientious text-book, of which it only remains to be said that the tradition laid down by the original author has been faithfully carried on by his successors.

Lymphatics, Lymph and Lymphoid Tissue. By Joseph Mendel Yoffey, D.Sc., M.D. (Manchester), F.R.C.S. (England), and Frederick Colin Courtice, M.A., D.Phil. (Oxon.), D.Sc. (Sydney) (Hon.); Second Edition; 1956. London: Edward Arnold (Publishers), Limited. 9½" x 6", pp. 518, with illustrations. Price: 60s.

THIS book is the second edition of the standard monograph on "Lymphatics, Lymph and Lymphoid Tissue" published by Drinker and Yoffey in 1939. In view of the very large amount of work on this subject since that date, the appearance of a second edition is long overdue. The general form of the book is unchanged. It falls essentially into two parts—the first on the physiology of lymphatic vessels by F. C. Courtice, and the second by J. M. Yoffey on the cells of the lymphatic tissue with almost exclusive concentration on the lymphocyte.

In the first part a mass of new experimental evidence supporting Starling's hypothesis is presented, and stress is laid on the return of water and protein to the blood vascular system as the essential function of lymphatic vessels. Much detail regarding fat absorption and transport and the passage of lipo-protein molecules through the capillary walls, a necessary basis for the study of diseases such as atheroma, is included for the first time.

In the second part all aspects of the problem of the lymphocyte are exhaustively reviewed, and a strong plea for its role as a possible precursor of other blood cells in the bone marrow is developed; but the main conclusion reached seems still to be that of Rich: "Literally nothing is known of the potentialities of the lymphocyte other than that they move and reproduce themselves."

Despite the great increases in knowledge since the first edition, it is probable that further progress is not far off. For example, the size of the postulated pores in the capillary wall is 33 Å, well within the limits of resolution of present-day electron microscopy, and correlation of structure and function in the capillary wall may soon be possible.

The book is well produced and will certainly remain the standard monograph on the subject. It is a credit to Australian medicine that one of its co-authors is director of one of our major research institutes.

The Complete Cookery Book for Diabetics. By Iris Holland Rogers; 1956. London: H. K. Lewis and Company, Limited. 8¼" x 5¼", pp. 116, with 21 illustrations. Price: 5s.

THIS well presented, amusingly illustrated little book contains some valuable low-calorie recipes which should make menu planning easier for diabetics.

Many diabetics complain of the monotony of the basic diet that they are given (in spite of substitution lists) and of a feeling of hunger after meals, and some of the cost of "free" fruits and vegetables, which makes this addition to the diet impossible. With the aid of these recipes welcome bulk and variety may be introduced, often at low cost.

An English publication, this book is intended for use in conjunction with diets issued from English diabetic clinics, and some modification is necessary for Australian diets. The English practice of giving as a routine a 1000 to 1200 Calorie diet to all patients not receiving insulin is far from general here. The condition of many Australian diabetics

is controlled by diet alone; but the diet may vary from 1200 to 1800 Calories, depending on the severity of the disease and the weight of the patient. For this reason the paragraph headed "Diabetics Who Do Not Take Insulin" (page 2) should be ignored, unless the patient does have the diet quoted.

Food composition tables are not interchangeable. The Australian figures (Osmond and Wilson) may vary from the English (McCance and Widdowson) by as much as +30% or −30%. This need not be a bar to the use of the recipes, since the staple foods are fairly standard, and a certain error is inevitable in the most carefully calculated diet; but the difference should be remembered.

In all the recipes emphasis is laid on the carbohydrate substitution, in terms of 10 grammes of carbohydrate or two-thirds of an ounce of bread. This corresponds roughly to Australian substitutes; but the tendency in this country is to make complete substitution with regard to Calories, protein, fat and carbohydrates. This is quite possible, since recipes are fully analysed.

The section on invalid diets and fluid substitutions is one which most diabetics will welcome.

The few diabetics who find it difficult to follow the simplest basic diet could considerably increase their existing diet error by experimenting with these recipes; but used intelligently by the average diabetic this book could make his meals more interesting. More important, it could allow him to take a greater part in one aspect of social life, the enjoyment of food, instead of being conspicuously and obviously "different", as is so often the case. Many physicians, too, will find the book helpful in answering some of the questions from diabetic patients which begin (often terrifyingly): "Doctor, may I eat—?"

Fundamentals of Immunology. By William C. Boyd; Third Edition; 1956. New York and London: Interscience Publishers, Incorporated. 9¼" × 6¼", pp. 790, with illustrations and tables. Price: $10.00.

Thirteen years have passed since the publication of this valuable reference book of immunology. These years have witnessed advance, change and increase in subject material. Therefore it is not surprising that the new edition is considerably larger than its predecessor.

Professor Boyd states in his preface that in large degree the book has been entirely rewritten, and some old ideas have been relinquished and new ones adopted. However, in its essential plan it is the same, and workers accustomed to the older one will approve the maintenance of that familiar structure. The great accumulation of information in relation to hypersensitivity and immunity has led to the expansion of this subject into four chapters. There is a whole new chapter on auto-immunization and disease, whilst the ones headed "Immunity in Action" and "Practical Uses of Immunity", with their orderly survey of mechanisms of resistance to disease in the former, and methods of producing active or passive immunity to human disease, are almost completely new.

The new material will now be briefly considered. The recent description by Pillemer of a component of normal serum, which he has named properdin, finds a place in the description of complement and its activity, and the properties and action of properdin in bacteriolysis of Gram-negative bacteria are discussed.

Consideration of organ specificity in antigens and their cross reactions between antibodies of similar organs from different species is followed by a discussion of tumour immunity, and here immunological evidence, brief though the space allotted to it may be, suggests that there is much more to come. Cell antigens in relationship to blood groups increase steadily in number, and the different notations in use occupy valuable space, since they must be described in order that the literature of the subject may be read.

The greatly expanded chapters on hypersensitivity contain an extremely useful large table of comparison between immediate and delayed reactions and their manifestations. The picture of the baby walrus, allergic to its diet of cow's milk and perhaps thwarted of mother love, might have been more impressive if it had been contrasted with a happy normal breast-fed control.

The chapter on auto-immunization and disease recognizes the important concept introduced by Professor Medawar—namely, that "mammals and birds never develop, or only to a limited degree, the power to react immunologically against foreign homologous tissue cells to which they have been exposed sufficiently early in fœtal life". The discussion which follows links auto-immunization with the mechanism of such conditions as the collagen diseases and march hæmoglobinuria.

The final chapters cover immunity in action, the practice and control of immunization processes in the interest of the public health, and laboratory technique. Many practical aspects are dealt with, and useful information of international travel requirements, often not readily available, is presented.

Constant reference is made to "Boyd's Fundamentals" in laboratories throughout the English-speaking world and probably all over Europe. The new edition will doubtless immediately replace the old and rapidly become as well used. We note with pleasure a slightly less formal mode of expression, and an occasional vivid phrase which mellows the taste of mental pabulum calling for extremely careful mastication, in spite of a considerable degree of fragmentation in its present state.

The publishers have produced a beautiful volume. The references are considerably increased in number, and the attaching of chapter numbers to the tables is a small new feature of great convenience.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Pathological Histology", by Robertson F. Ogilvie, M.D., D.Sc., F.R.C.P.Ed., F.R.S.E., with a foreword by A. Murray Drennan, M.D., F.R.C.P.Ed., F.R.S.E.; Fifth Edition, 1957. Edinburgh and London: E. and S. Livingstone, Limited. 8½" × 5½", pp. 494, with 334 photomicrographs in colour. Price: 52s. 6d.

A revised and expanded edition intended to supply the needs of both undergraduate and post-graduate.

"The Year Book of General Surgery (1956-1957 Year Book Series)", edited by Evarts A. Graham, A.B., M.D., with a section on anæsthesia edited by Stuart C. Cullen, M.D.; 1956. Chicago: The Year Book Publishers, Incorporated. 7½" × 5¼", pp. 647, with illustrations. Price: $6.75.

One of the Practical Medicine Series of Year Books.

"The Year Book of Radiology (1956-1957 Year Book Series)": Radiologic Diagnosis, edited by John Floyd Holt, M.D., and Fred Jenner Hodges, M.D.; Radiation Therapy, edited by Harold W. Jacox, M.D., and Morton M. Kligerman, M.D.; 1957. Chicago: The Year Book Publishers, Incorporated. 9" × 6", pp. 430, with many illustrations.

One of the Practical Medicine Series of Year Books.

"Science and the Humanities", by Gavin de Beer; The Rickman Godlee Lecture, delivered at University College, London, 25th October, 1956; 1956. London: H. K. Lewis and Company, Limited. 10¼" × 6½", pp. 21. Price: 2s. 6d.

The author is Director of the British Museum (Natural History).

"Biochemical Individuality: The Basis for the Genetotrophic Concept", by Roger J. Williams; 1956. New York: John Wiley and Sons, Incorporated. London: Chapman and Hall, Limited. 9¼" × 6", pp. 228, with illustrations. Price: $5.75.

"A pioneering study of individual differences in biochemical make-up."

"Aureomycin (Chlortetracycline)", by Mark H. Lepper, M.D., with a foreword by Henry Welch, Ph.H., and Félix Martí-Ibáñez, M.D.; Antibiotics Monographs Number 7; 1956. New York: Medical Encyclopedia, Incorporated, Interscience Publishers, Incorporated. London: Interscience Publishers, Limited. 9¼" × 6", pp. 156. Price: $4.00.

Deals primarily with the clinical use of the antibiotic.

"Industrial Deafness: Hearing Testing and Noise Measurement", by Joseph Sataloff, M.D., D.Sc. (Med.); 1957. New York, Toronto, London: The Blakiston Division, McGraw-Hill Book Company, Incorporated. 9" × 6", pp. 347, with illustrations. Price: $8.00.

A "practical guidebook to aid in solving the numerous problems related to noise" prepared for the reader with previous technical knowledge.

The Medical Journal of Australia

SATURDAY, APRIL 6, 1957.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of the article. The abbreviations used for the titles of journals are those adopted by the Quarterly Cumulative Index Medicus. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

HEALTH HABITS AND HEART DISEASE.

THAT health habits, including nutrition and exercise, play a part in the incidence of heart disease is very widely believed. E. P. Luongo[1] has made a detailed study, from this point of view, of 100 patients suffering from manifest coronary disease compared with 200 control subjects in the same age group in whom coronary disease could not be detected. All patients were in the fourth or fifth decade of life. The study suggests strongly that the total caloric intake is a factor in the prevention or postponement of coronary disease. Only 27% of the test patients had been having average diets with variety of food with a balance between the total caloric intake and energy expenditure. They had maintained average or ideal weight over a period of ten to fifteen years prior to the first attack. On the other hand 60% of the control group maintained average weight over ten to fifteen years before the investigation. There was a close correlation between overweight, excessive total caloric intake and lack of exercise in the coronary disease group. In 70% of the cases in this group no regular exercise patterns were present either at work or away from work. In only 30% of the control group was there lack of exercise. A history of the taking of tobacco and alcohol did not suggest that these substances played any part in the causation of coronary disease, although when the disease is developed the use of tobacco may be harmful, while alcohol in moderate amounts may be helpful to the patient.

It has been thought that occupation may play a part in producing coronary disease. Different occupations have different physical, emotional and mental demands. In Luongo's study the occupational distribution of subjects of coronary disease was approximately the same as the occupational distribution in the control group. The incidence of coronary disease was the same among executives and professional, clerical and skilled workers all doing moderate or sedentary work. Stress, from whatever cause, has to be considered as a possible ætiological factor. In this series most of the patients with coronary disease had had detectable stress patterns prior to the first attack. These were related more to domestic and social problems than to occupation. Stress tends to encourage overeating, and in this way may enter into the ætiological picture. A point of some importance in the early diagnosis of coronary disease, and in the detection of probable candidates for the disease in the future, is the observation that there is a sustained rise of pulse rate (15 to 30 beats per minute) and of diastolic pressure (10 to 30 millimetres of mercury) on the average of two to five years prior to attack.

From the data collected it would seem that sedentary living and poor health habits are the real culprits in coronary disease, and not hard work, over exercise or occupational stress. On the nutritional side, apart from consumption of excess Calories, present indications point strongly to the consumption of excess fat as a causal factor in coronary disease. This has been very much debated over the past few years. Most of the discussion has related to the effect of the consumption of fatty acids generally on the increase of cholesterol in the blood, and the high correlation of raised blood cholesterol levels and other blood lipids and the incidence of coronary disease. In April, 1956, H. M. Sinclair[1] made extensive claims that a deficiency of fatty acids with several double bonds was responsible for the development of coronary disease. According to Sinclair, atherosclerosis might be regarded as a chronic deficiency of arachidonic acid. At about the same time, B. Bronte-Stewart[2] and his co-workers in South Africa stated that animal fats but not vegetable fats raised serum cholesterol levels. They, too, considered that the unsaturated fatty acids were important. These papers were discussed at length in the columns of "Current Comment" of June 16, 1956. Recently, Ancel Keys, J. T. Anderson and F. Grande[3] have again investigated the effects on the level of blood cholesterol of vegetable and fish oils with a high percentage of highly unsaturated fatty acids. They compared the effects of corn oil (with 45% of linoleic acid and an iodine number of 120) with sunflower seed oil (with 61% of linoleic acid and an iodine number of 131) and with sardine oil (with less than 2% of linoleic acid and an iodine number of 188 and a high content of fatty acids with three, four or more double bonds). Butter was the animal fat used for comparison. In spite of the fact that corn oil contained less unsaturated fatty acids than sunflower oil and sardine oil, it had the least effect in raising the serum cholesterol

[1] *J.A.M.A.*, November 10, 1956.

[1] *Lancet*, April 7, 1956.
[2] *Ibidem*, April 28, 1956.
[3] *Ibidem*, January 12, 1957.

level. The mean serum total cholesterol level of subjects on the butter fat diet was 52 milligrammes per 100 millilitres higher than that of those on the corn oil diet. The findings in these experiments do not support the view that the serum cholesterol level in man is directly related to the essential fatty acid content or the degree of unsaturation of the fatty acids in the diet. Corn oil has an effect not measured by either of these characteristics. Z. A. Leitner[1] has confirmed the observation that when animal fats are replaced by corn oil in the diet, there is a rapid fall in blood cholesterol level with an equally rapid rise when the corn oil is replaced by butter.

Leitner warns against drawing any conclusions from these experiments in relation to such a complex condition as atherosclerosis. There is now overwhelming evidence that the dietary intake of polyethenoid fatty acids seriously interferes with the metabolism of at least fifteen species of animals. This may be due to destruction of vitamin *E* by the highly oxidizable polyethenoid fatty acids; at any rate the metabolic injuries can be corrected by giving vitamin *E*. Leitner points out that with "improvements" in the food industry, processed foods are becoming more and more deficient, especially in pyridoxin, which is necessary for fatty acid metabolism. Until further research has clarified the relation between fatty acid intake, blood cholesterol level and atherosclerosis, the best advice seems to be to cut down but not cut out fatty acids of all kinds in the diet.

Current Comment.

SILO-FILLER'S DISEASE.

Nitrous fumes have been known as an irritant for a very long time, and *aqua regia* is usually associated with images of noxious fumes. With the coming of iron and steel in the modern world, nitrous fumes became a well-recognized industrial hazard. Nitrogen dioxide and nitrogen tetroxide and possibly higher polymers exist in an equilibrium in the normal environment and are the brown irritating fumes which are emitted from nitric acid. They are evolved whenever acid acts upon metal, as in bright dipping, pickling and etching; or in nitration of organic material such as cotton. Nitrous fumes and nitric acid occur as by-products of many chemicals, such as explosives and dyes. They also occur during all forms of welding and burning and gas shrinking under conditions of poor ventilation in enclosed spaces.

Concentrations of ten parts per million to 100 parts per million will kill cats, guinea-pigs, mice, rats and rabbits.[2] The cause of death appears to be pulmonary œdema, and the mode of dying, asphyxia. A concentration of 100 parts per million may well be required to kill, as many instances have been recorded of animals kept in concentrations up to 24 parts per million six hours per day, five days per week for nine weeks with no deleterious effects save a methæmoglobinæmia from 2·9% in rabbits to 15·0% in rats. As methæmoglobinæmia has been described in welders exposed to concentrations of 2·4 to 5·4 parts per million of nitrous fumes, it has been suggested that it be used as a measure of exposure to nitrous fumes.

Most water-soluble irritant gases exert their effect upon the most proximal part of the moist respiratory tract. But this does not occur with nitrogen dioxide. Most probably nitrogen dioxide reaches the alveoli, where moist and relatively static conditions prevail. Here nitrogen dioxide hydrolyses slowly into nitrous and nitric acid. This gives rise to a massive pulmonary œdema up to eight hours after exposure to the gases. The cardinal signs are extreme dyspnœa, cyanosis and the signs of pulmonary œdema.

T. Lowry and L. M. Schuman[1] have recently described what they call "silo-filler's disease" and have ascribed the cause to nitrous fumes. They have reported two cases in detail, and commented on four other cases of what they hold to be a definite clinical and pathological entity. They describe in detail two cases of *bronchiolitis fibrosa obliterans* in farmers who were brothers and who both attempted to enter the same freshly filled silo. Both died, and the two cases exhibited remarkable similarity. The first farmer had climbed an enclosed ladderway in order to open the top door of the silo for ventilation. The silo had been filled the previous day with fresh corn silage but no chemical additions. Irritating fumes were so overpowering that the farmer retreated without accomplishing his task. From this time he coughed intermittently, wheezed, was weak and listless, and was dyspnœic on the slightest exertion. Sixteen days later he became feverish and was treated for pneumonia. He was subsequently admitted to a major hospital *in extremis*. He was cyanosed in spite of administration of oxygen, was dyspnœic, and had a violent non-productive cough. X-ray examination showed multiple lung opacities indistinguishable from the appearances produced by, for example, miliary tuberculosis. Electrocardiography demonstrated *P-pulmonale* in standard leads two and three. His condition deteriorated slowly, and he died. It is noteworthy that as he progressed towards death his decreasing pulmonary function was measurable in terms of a rising plasma bicarbonate content to a terminal figure of 45 milliequivalents per litre. All investigations for infective organisms gave a negative result. Necropsy revealed *bronchiolitis fibrosa obliterans*. Lowrey and Schuman remark that freshly filled silos are known to be dangerous and should be avoided for a week. Nitrogen dioxide in concentrations of 200 to 4000 parts per million can be evolved from silage. Certainly *bronchiolitis fibrosa obliterans* (which has been regarded as the result of fibrinous organization of pulmonary œdema) may result from exposure to nitrous fumes, as shown by A. J. McAdams;[2] but it also occurs as a result of exposure to most irritant gases, although with extreme rarity. The condition sometimes follows chronic chest diseases, or pædiatric exanthemata, and sometimes (J. S. La Due[3]) occurs with no known ætiology.

Lowrey and Schuman have postulated an interesting clinical entity; and it would be interesting to know how often the condition has occurred in this country, if indeed silo-filler's disease is an entity.

DIFFERENTIAL LUNG FUNCTION: ITS ESTIMATION WITHOUT BRONCHOSPIROMETRY.

Bronchospirometry is a crude investigation which has proved valuable in certain cases because only crude answers are required to the problems put before it. When over-all lung function is good, differential lung function becomes unimportant in most unilateral lesions, and in a proportion of bilateral ones. In the latter group, everyone with moderate experience of the procedure will recall cases in which the information gained was both significant and surprising, but the number of these cases can be reduced by skilled fluoroscopy. It is well to remember that in the presence of reasonable over-all lung function, clinical factors will usually determine the management of the pathological condition, which will rarely be

[1] *Lancet*, January 12, 1957.
[2] "Industrial Hygiene and Toxicology", edited by F. A. Patty, New York, 1949.

[1] *J.A.M.A.*, September 15, 1956.
[2] *Am. J. Med.*, August, 1955.
[3] *Arch. Int. Med.*, October, 1941.

seriously influenced by the bronchospirometric findings. When over-all lung function is such that any surgical procedure may be intolerable, bronchospirometry can make a useful contribution to solving the problem of whether or not to operate, or of which side to do first. On the other hand, even if the diseased lung is found to be largely functionless, it is fallacious to assume that its removal, or a thoracoplasty, will not impair function on the comparatively healthy side. Ability to redistribute blood flow without the development of pulmonary hypertension, and ability to over-inflate the remaining lung without upsetting ventilation-perfusion ratios, are more critical factors than further loss of ventilatory capacity or loss of oxygen-absorbing tissue, important as these may be. Nonetheless, by the most exacting standards, there remains a small group of cases in which the bronchospirometric findings are valuable and even critical. They are notably helpful in the presence of pleural thickening where there is also disease of the opposite side. This state of affairs is not uncommon in patients with long-standing tuberculosis, particularly when they have had an artificial pneumothorax on one side and have subsequently developed disease on the other. Even in these cases, if over-all ventilatory capacity is good, and fluoroscopy shows good lightening with good chest movements on the side in question, then bronchospirometry may have little to add. Perhaps a more important group is made up of those cases of large bullæ in one lung for which surgical treatment is being considered, for it is by no means rare to find that the affected side is contributing very significantly to oxygen uptake, the opposite side being affected by radiologically less obvious emphysema.

From the physiological point of view, bronchospirometry is too unphysiological a procedure to contribute much to any fundamental study of lung function. The catheter size, *plus* the resistance in the circuits, considerably increases airways resistance, and the dead space for each lung is materially increased. The use of oxygen rather than air in the usual closed circuit method means that the oxygen uptake of an under-ventilated lung is over-estimated, relative to normal circumstances. In clinical work these difficulties are largely overcome by limiting the interpretation of bronchospirometric findings to a comparison of the two sides; the findings cannot be safely related to the assessment of over-all lung function under normal conditions. Occasionally changes in the relative ventilation of the two sides with changes in respiratory effort suggest an alinear compliance line for the affected hemithorax, but this is probably more of interest than of clinical importance.

The excellent and enthusiastic report of H. A. Fleming and L. R. West,[1] from Sully Hospital in Wales, gives a good bibliography for those who wish to study the subject further. Those who have seen the procedure carried out by these workers will agree that in their hands it is a simple and speedy business. Many will perform the investigation less often, and in units where the patients regard it as very much an exception to routine. In these circumstances it may well have been found more troublesome and time-consuming, and perhaps less informative. Attention may be drawn to a minor fallacy implicit in Fleming and West's conclusion that bronchospirometry provides a better assessment of function than is obtainable from clinical and radiological studies. This is, of course, true; but radiology, with the exception of fluoroscopy, is no judge of respiratory function, and over-all lung function tests, with which bronchospirometric findings can be fairly compared, are certainly an advance on clinical judgement in the type of case under consideration. Fleming and West are on much safer ground in stressing the pre-operative and post-operative performance of bronchospirometry as a research tool, with the object perhaps of obtaining enough information ultimately to dispense with the procedure in these circumstances.

From many points of view, there is room for a means of assessing differential lung function which does not involve special endotracheal catheterization. G. H. Armitage and A. Brian Taylor,[2] following up a suggestion made by Armitage and Professor W. M. Arnott, of Birmingham, some five years ago, have gone part of the way towards this. The share of each lung in oxygen uptake is calculated from the difference in respiratory quotient between samples of air taken simultaneously from the two main bronchi and trachea, the respiratory quotient being particularly suitable because the values are unaffected by any dilution of the samples with air. The samples are taken with fine metal tubes during successive expirations of appropriate lengths inserted through a bronchoscope; bronchoscopy is probably always carried out in patients likely to have surgical treatment. Gas analysis was performed with a Sleigh apparatus, but the Haldane or Scholander methods are equally applicable. Using this technique, Armitage and Taylor found no significant difference in the respiratory quotients of two apparently healthy sides (implying no significant difference in oxygen uptake) in the ten cases of this type studied: this, of course, is essential to the establishment of the method's validity. In two patients with considerable bronchospasm, two separate tracheal samples at different levels showed, by their differing values, that there was a lack of complete mixing of the air-streams from each lung. This means, in effect, that the tracheal samples should be taken from as high up as possible.

In 35 patients with partial loss of function in one lung, as judged by clinical and radiological criteria, air sampling showed significant differences on the two sides. In one case air sampling indicated the reverse of what had been expected, in a patient with emphysema and a giant bullous cyst. As not infrequently happens, function was less on the side not apparently cystic, a finding subsequently confirmed by conventional bronchospirometry. In ten patients clinical and radiological data suggested that there was total or almost total loss of function on one side, and air sampling showed essentially identical respiratory quotients on the two sides. This apparent paradox merely reflects the fact that the diseased lung is simply a "backwater" in communication with the normal lung. When identical respiratory quotients are found, it is no more difficult to say whether this represents bilateral normal function or unilateral total loss of function than it is to tell midnight from midday when the hands of the clock point to twelve—or so Armitage and Taylor picturesquely put it.

The air sampling technique provides information of rather more fundamental physiological significance than does conventional bronchospirometry, in that it is not concerned with dead space ventilation. The respiratory quotient reflects the over-all ventilation-perfusion ratio of each lung; that is, it can be inferred whether partial loss of function on one side is attributable chiefly to alveolar hypoventilation on the one hand or to relative underperfusion on the other. Armitage and Taylor found that the commoner initial disturbance was alveolar hypoventilation; conventional bronchospirometry, which ignores the effect of dead space ventilation, had rather suggested the reverse.

A theoretical objection to the technique lies in the difficulty of being certain that the gas collected from each main bronchus is in fact representative of the alveolar air of the whole of that lung; for example, the assumptions are made that effective mixing of all segmental contributions has occurred, and also that both lungs empty synchronously. These points may be of more academic than practical importance. Further work, and in particular a direct comparison of the results of the two methods, will be awaited with interest, for the advantages of being able to estimate differential lung function by means of samples collected at routine bronchoscopy and analysed by a technician are obvious. Incidentally, it may be mentioned that Birath, in Sweden, attempted to assess differential lung function in a similar way by passing ureteric

[1] *Thorax*, 1954, 9: 273.

[2] *Thorax*, 1956, 11: 281.

catheters into each main bronchus many years ago; his major difficulty was the sampling problem to which we have referred.

THE HISTORY OF A GREAT HOSPITAL: L'HÔTEL-DIEU AND ITS FUNCTIONS.

In a recent issue of this journal we gave a brief account of the *Hôtel-Dieu*, the oldest hospital in Paris, from the point of view of its actual buildings. But buildings alone do not make a hospital; they are its body, important, but less so than its soul. This concept of a hospital was put forth by Harvey Cushing in his *"Consecratio Medici"*, and was used in 1930 by R. Scot Skirving[1] in a paper he presented at the first annual reunion of the Royal Prince Alfred Hospital Residents and Ex-Residents' Association. A short quotation from this paper may well serve as an introduction to this comment:

> Our hospital, indeed, is not yet an ancient refuge for the sick and hurt, hoary with years and tradition and sanctified by centuries of human suffering, endured and relieved within its time-worn walls. It is not yet an *Hôtel Dieu* or Saint Bartholomew's, to mention only two great hospitals, where many generations of men and women have devoted their lives to the relief of their fellow men and the education of the disciples of Saint Luke.

From the earliest times, the *Hôtel-Dieu* was under the jurisdiction of the Bishop and Chapter (G. Menegaux).[2] They combined the spiritual functions, which they exercised in the hospital as in any other religious community, with the temporal duties of administering the institution. In 1505 the first step was taken in the process of bringing the hospital under lay control; this was an Act of Parliament, by which the responsibility for managing it was vested in a commission of eight members chosen from among the leading citizens of the city. This tendency towards increasing lay control was made more definite by the statutes of 1535 and 1652. However, the powers of the Chapter did not lose in importance. It nominated and appointed a *"Maître au spirituel"*, whose task was "in all things to uphold the glory of God and the deepening of His worship in the hospital". However, this same *Maître*, in the absence of the administrators, was required to have an eye to temporal matters in the institution. Menegaux remarks that this provision brought about ceaseless disagreements with the municipal authorities, often on futile pretexts. Nor was the behaviour of the Chapter's representative always above reproach. Under the authority of the *Maître au spirituel* were the chaplains, divided into two categories. The first carried out the church offices; they accompanied the funeral processions, and took care that the funeral attendants interred the bodies reverently. The second group had charge of the people entering the hospital, of the administration of the sacraments and of the confessions of the patients. They kept the register of baptisms, renunciations and testamentary dispositions. They were not always entirely disinterested, and many of them have left records of large sums of money which they managed to acquire dishonestly in the course of their duties.

The statutes of 1535 fixed at 80 the number of nuns in the hospital; 40 were to be professed sisters and 40 novices. The number was later raised to 120. Under the direction of the Mother Prioress, their duties were to care for the patients, and to be responsible for the linen room, where mending was done and lint was made, for the cupboard where the patients' clothes were bundled up and stored, for the laundries, for the dispensary—in short, for everything to do with the community. In 1652, the Augustinian Sisters of the *Hôtel-Dieu* received new statutes, under which they served until the Revolution. These statutes specified the manner in which they were to be recruited, their rights and especially their duties. To the usual vows of poverty, chastity and obedience a fourth was added—that of service to the sick poor. At that time Vincent de Paul (later canonized), Superior of the *Collège des Bons-Enfants*, exercised considerable influence on the *Hôtel-Dieu*. He succeeded in organizing into an acceptable body the women who had always done voluntary work at the hospital (sometimes with so much clumsiness and lack of tact that they had fallen foul of the authorities and the nursing staff). This work was ratified by the orders of 1652, which required the Augustinian Sisters to accept these auxiliary workers whole-heartedly.

In the sixteenth century the *Hôtel-Dieu* took in everybody who came to its doors—the destitute, the aged, travellers and pilgrims as well as the sick—without regard to age, sex, nationality, religion or even the type of illness. Patients included those with fevers, the wounded, those with contagious diseases (even those infected with plague) and the mentally deranged. Until the foundation of the general hospital even beggars were admitted, except during Lent. Prisoners held in prison for capital crimes were cared for in the *Hôtel-Dieu* when they fell ill; Menegaux tells us that there were as many as 120 at a time. Although they were kept together in a room with all its doors and windows barred, there was constant trouble; in the uprising of 1754, two of the sisters were fatally wounded.

The number of beds for the patients, small at first, grew year by year. In the twelfth century, a capitular charter made it obligatory for every canon who renounced his prebendaryship or died to leave a bed to the *Hôtel-Dieu*. Later, private endowments increased the number considerably. In the fifteenth century the figure reached 300, in the sixteenth century about 500, and at the end of the eighteenth century 1219, its maximum. The wards contained three or four rows of beds. Made of wood and with feather mattresses, they were closed in with red serge curtains in the winter and with white cotton curtains in the summer. Each bed held four, five or six patients, lying parallel or head to foot. During epidemics, patients were even placed on the bed testers, through which they sometimes fell in their death throes. It is unnecessary to go into details of the appalling conditions.

For centuries the treatment given was of the simplest, and was in the hands of the nuns. In 1221 the surgeon Hubert took it upon himself "for charity and for the repose of his soul" to attend the patients in the *Hôtel-Dieu*. In the fourteenth century a real medico-surgical service was established, supervised and paid for by the hospital administration. During the sixteenth century the visits were made at 6 a.m. in summer and 7 a.m. in winter. A physician came first, followed by a surgical assistant and an apprentice apothecary. At approximately noon the surgeons attended to carry out bleedings and dry cuppings and perform the prescribed operations. The chief surgeon was aided by surgical assistants and by surgeons qualifying for their mastership; the last-mentioned were in a sense the clinical clerks of the period. On account of the privileges that they enjoyed at the *Hôtel-Dieu*, after six years of practice they were accepted without test or competitive examination as sworn surgeons of Paris. However, the College of Surgery, freed from the unfortunate association with the barbers by the Letters Patent of Louis XV in 1743, established a regular course of instruction, of which it rapidly became proud. The direct nominations made by the *Hôtel-Dieu* naturally gave rise to frequent disagreements. The most frequently performed operations were trephining, the surgical treatment of lachrymal fistula and hare-lip, and amputations. Operations for stone were performed in a special room. The specialists who undertook them were barber-surgeons, who handed down their art from father to son. But everything was superseded by bleeding, which was the universal remedy for every stage of every illness. Because of the great number of patients and the constant attendance at the hospital, there is no doubt that valuable surgical knowledge was acquired at the *Hôtel-Dieu*. Ambroise Paré, who was a surgical assistant there from 1530 to 1536, acknowledged this fact. Jean Méry, one of the outstanding surgeons of the period, and surgeon to Queen

[1] M. J. Australia, December 27, 1930.
[2] *Presse méd.*, December 25, 1956.

Marie-Thérèse, improved the teaching considerably by setting up in the precincts of the hospital a dissecting room to be used for lessons in anatomy and operations on the cadaver. In addition to its development as a surgical training centre, the *Hôtel-Dieu* under the Augustinian Sisters became in effect a school for nurses, from which they went all over the country. Its maternity service was a real school for midwives; its administration was outstanding, and was a source of help to provincial hospitals in their difficulties.

We have already seen[1] that, after the series of fires which burnt the hospital, the last and most serious occurring in 1772, it was rebuilt on the same site and remained there for another hundred years. The period of its development from then to the present time, which was bound up with the reorganization of the teaching of medicine, may well be left to be discussed on another occasion.

SPACE TRAVEL.

MAN has always been inquisitive; but the price paid for this curiosity and the amount of labour involved have all too frequently been excessive. However, the unknown has always urged him on. Magellan sailed from Cabo Deseado westwards into an unknown ocean which he named Pacific because of a gentle swell and favourable winds. His journey into the unknown took ninety-eight days, at the end of which time he reached the Ladrones reduced to a diet of ox hides, sawdust, and rats. Tissandier, in an attempt to explore the atmosphere and establish an altitude record, ascended with two companions. Only he survived. The ill-fated Scott Antarctic expedition, for whose failure scurvy has been suggested as the weak link, was an heroic venture, retrospectively ill-equipped with materials and knowledge. Now man wishes to explore space. There is still a little romance remaining in thoughts of space travel; but most of the thinking is in terms of military and political strategy. The problems of high altitude flight and space travel have been discussed by A. E. Mayo.[2] This paper reveals what a vast amount of work has been done on high altitude problems. However, the number of physical limitations which are yet to be overcome is great—for instance, high acceleration, dissipation of heat, radiation effects, particularly cosmic radiation. Even if these are overcome, what are the chances of collision with a meteor? And further, can this next disaster be overcome? Or shall we then be faced with escape from a damaged space ship if in fact we can escape? The amount of labour involved in solving such problems will be truly colossal and the cost even greater. For all that, man will still be led by his curiosity, and no doubt our further knowledge of space will be bought at the price of life.

BLOOD TRANSFUSION CENTRES IN ITALY.

THE Italian Association of Transfusion Centres was founded in Florence on July 18, 1954, and its laws were formulated on July 27 of the same year. Rome was proclaimed as the headquarters of the Association. This body has started publishing a review, the first number of which is now to hand.[3] The pioneer work of Landsteiner explained the apparently erratic results of previous transfusions and ushered in the present era, in which the blood of the patient is augmented or replaced by blood from a suitable donor. We now know that the original grouping was much too simple, for many subsidiary types have been described which must be considered in the choice of a donor. This first number is mainly devoted to a plea for the standardization of transfusion methods throughout Italy. The procedures for safeguarding recipient and donor, and the multiplicity of detail in the techniques for obtaining, preserving, pooling and administering blood and plasma necessitate the training of skilled experts and a highly organized set of standards to be adhered to in each transfusion centre. The Association believes that such organization should have a legal basis determined by Parliament. This review contains original articles dealing with certain problems involved in transfusion. In one it is stated that hæmoglobin can display eight aberrant forms. In another the work of Akeroyd and Crosby (1955) is accepted, indicating that only 65% of "universal donors" can really be regarded as such, and of this 65% some 15% can occasionally produce untoward results, so that only 50% are in all truth "universal donors". The properties of an ideal mixing fluid are enumerated, and then there appears the dry sentence "*Questa soluzione non existe*". At the end of the review there is a table of "Minimum Requirements" (it is interesting to note that the English phrase is used) largely drawn from American sources. Each article ends with a good bibliography and the scholarship of the writers is evident. One finds here: "Handbook of the Red Cross Blood Transfusion Service. Australian Red Cross Soc. Sidney [*sic*], 1945."

THE APPROACH TO THE SCHIZOPHRENIC.

IN "*Structuration dynamique dans la schizophrénie*", published as a supplement to the *Schweizerischen Zeitschrift für psychologie*, Gisela Pankow[1] reports the analytical therapy of two patients, following techniques used by Sechehaye (this was recently reviewed in this journal), Sullivan, Fromm-Reichmann and others. As Pankow explains in her preface, her aim is to try to descend deep into the mind of the psychotic and to help the patient to translate his morbid experiences into words. She very aptly asks: "Do we really appreciate what goes on in the psychotherapy of a psychosis?" In the patient's statements we get only a distorted impression of what goes on in his mind. Using a geological simile, Dr. Pankow seeks to reintegrate the scattered fragments of the deeper strata of the mind, a process which she terms "*structuration dynamique*". She goes on to say that these deeper structures may be pliable or rigid, and in either instance expansive or restrictive. By way of illustration she presents details of two cases, the one pliable-expansive, the other rigid-restrictive. In the former case, a hebephrenic girl, aged eighteen years, had delusions about her body and, in particular, her sex. Phantasies of flying saucers were interpreted as symbolizing human desires. Interpretation of numerous other psychotic phantasies in the course of a lengthy analysis led the patient back to reality and resumption of her profession as an artist. The second case was that of a negativistic schoolmistress, aged forty years. She also had somatic delusions and could not form a complete image of her body. At one stage she modelled a flower-man in wax (this is illustrated in a colour-plate). The flower was shown to bear a sexual symbolism related to certain contents in the patient's psychosis. With the acquisition of a reintegrated image of her body she attained a good remission of her symptoms.

As Professor J. Favez-Boutonier writes in a preface, the psychotherapy of schizophrenia is marked by more hope than success, and the techniques used in one successful case can seldom be applied to another with equally good results. Maybe there is something in the time and attention given to individual cases.

[1] M. J. AUSTRALIA, March 30, 1957.

[2] *J. Aviation Med.*, October, 1956.

[3] *La Trasfusione del Sangue, Rivista della Associazione Italiana Centri Trasfusionali*, Year 1, Number 1, July-September, 1956, "*Il Pensiero Scientifico*", Rome.

[1] "*Structuration dynamique dans la schozophrénie: Contribution à une psychothérapie analytique de l'expérience psychotique du monde*", by Gisela Pankow, with a preface by Juliette Favez-Boutonier; 1956. Bern: Verlag Hans Huber. 9" × 6¼", pp. 80, with illustrations.

Abstracts from Medical Literature.

THERAPEUTICS.

Vaginitis.

H. R. Pace and S. I. Shantz (*J.A.M.A.*, September 22, 1956) discuss the treatment of vaginitis with nystatin ("Mycostatin"). They state that vaginal discharge and pruritus are generally associated with monilial (*Candida albicans*) or trichomonal vaginitis; monilial vaginitis is the more common (three to one) since the introduction of antibiotics. It is said that the proportion of monilial to trichomonal vaginitis is seven to one, and up to 15 to one in pregnant women. Gentian violet had been relied on for treatment of these complaints, but it is neither popular nor easy for the patient to apply. Nystatin is derived from *Streptomyces noursii*. The authors treated 59 patients, who were instructed to insert one or two tablets, each of 100,000 units of nystatin, every night for seven to fourteen nights; 96% were relieved of symptoms, and the results of cultures became negative in all but one patient. There were recurrences in 74 cases, and treatment with nystatin gave excellent results. In cases of non-monilial vaginitis only two of 17 patients were relieved.

Metabolic Insufficiency.

C. R. Tittle (*J.A.M.A.*, September 22, 1956) has diagnosed metabolic insufficiency apart from thyroid deficiency. He states that the patients have lethargy, dullness, slowing down and other symptoms and signs akin to hypothyroidism and a subnormal basal metabolic rate, but they do not respond to treatment with thyroid. In rare cases, such a condition may be due to nephrosis, pituitary deficiency or Addison's disease, but in the majority there is no obvious cause for the hypometabolism. Treatment with L-triiodothyronine has given good results. The author selected eight patients for treatment with this preparation, five males and three females, and gave them 12 to 25 microgrammes daily, increasing the dose gradually up to 50 to 100 microgrammes daily. After two months symptoms became less and the basal metabolic rate rose from —28% or lower to —16% or less, in six of the eight cases. In three cases insomnia, palpitation and nervousness led to cessation of the treatment. Two of the patients discontinued treatment. The dose of the drug considered safe and effective was about 50 microgrammes.

"Chlorambucil."

J. E. Ultmann *et alii* (*J.A.M.A.*, September 15, 1956) describe the uses of "Chlorambucil" in the treatment of chronic lymphatic leuchæmia and certain lymphomata. "Chlorambucil" is an aromatic nitrogen mustard, which is related to "Myleran". Eighteen patients were treated for chronic lymphatic leuchæmia with doses of from 5 to 30 milligrammes daily, given by mouth for five to seven weeks; three patients obtained excellent results and eight others good results in respect to hæmoglobin level, white cell count, splenomegaly and lymph node enlargement. In cases of lymphocytic lymphosarcoma and Hodgkin's disease results were not so encouraging. Other investigators have reported benefit to patients with malignant lymphoma, lymphocytic lymphoma and follicular lymphoma, but the authors did not observe such good results. Toxic effects of "Chlorambucil" were rare.

Laryngeal Spasm.

B. R. Fink (*Anesthesiology*, July, 1956) states that laryngeal spasm is not a simple contraction of three layers of muscle, the true and false cords and the aryepiglottic folds, but a dual mechanism consisting of a shutter and ball-valve action. The shutter is made up of the true vocal cords and is controlled by the adductor muscles. The ball valve is constituted by the false cords and pre-epiglottic body, which becomes rounded and presses downwards and backwards, obstructing the larynx when the extrinsic muscles approximate the hyoid bone and thyroid cartilage. Expiratory stridor is due to closure of the shutter or true cords by reflex sensory stimulation in the presence of light anæsthesia. Inspiratory stridor can be due to closure of the shutter due to the Bernoulli effect, the glottis acting as a venturi tube; the pressures caused by the sudden flow of air adduct the true cords. In the conscious state this is counteracted by abduction during inspiration, but under anæsthesia adduction may occur, especially in children. This form of stridor is relieved by insertion of a tracheal tube. Complete laryngeal closure is caused by the ball-valve mechanism. The authors state that bag pressure through a face mask makes this condition worse as the pressure exerted in the pyriform fossæ tends to close the ball-valve mechanism more firmly. The better method is to pull the mandible forwards; this increases the distance between the hyoid bone and the thyroid cartilage. If this does not break the reflex, other methods should be used. The authors compare a laryngeal spasm with the middle phase of an extreme cough.

Chlorpromazine.

R. W. Birtue and B. E. Jones (*Anesthesiology*, July, 1956) experimented with some 120 rats to determine the effects of chlorpromazine on the survival time after a standard traumatic shock. This consisted of light pinches of the cæcum three times a second for fifteen minutes. Their results showed that the administration of chlorpromazine after trauma had no effect on the survival time of shocked rats, neither did a 45° head uptilt alter the survival time, which shows a lack of ganglioplegic effect, but use of chlorpromazine significantly reduced the amount of anæsthetic agent required. Other observations showed that cyclopropane and thiopentone anæsthesia did not alter the survival time, but ether anæsthesia statistically shortened the survival time. Also, increments of both ether and thiopentone, when these were the agents in use, caused a fall in blood pressure; whereas increments of cyclopropane caused a rise in blood pressure until hypotension from the trauma eventuated.

Anæsthetic Management of Hypophysectomized Patients.

P. P. Tung *et alii* (*Anesthesiology*, September, 1956) present details of four patients who underwent six operations after hypophysectomy. The authors consider several physiological derangements which are significant in these patients. They are hypersensitive to stress, show no fall in the number of eosinophile cells and adrenal ascorbic acid content after injection of adrenaline, are hypersensitive to insulin, and tend toward hypoglycæmia, slower rate of absorption of carbohydrates and storage of glycogen in tissues. They have diminished fat catabolism, alteration of nitrogen balance and retention of nitrogen, and a reduction of glyconeogenetic activity, anæmia, *diabetes insipidus*, atrophy of adrenal cortex, atrophy of thyroid gland, and myxœdema, hypogonadism and water and electrolyte imbalance. The authors state that all the patients will require an increased dose of adrenal and thyroid replacement therapy pre-operatively and post-operatively; and if the matter is urgent, triiodothyronine should be given by intravenous injection. Pitressin tannate will control the *diabetes insipidus*, and suitable water and electrolyte replacement, according to the blood chemistry estimation, may be required post-operatively, as well as blood transfusion for anæmia or blood loss. The patients stand the anæsthetic well.

Pericardiectomy for Chronic Idiopathic Pericarditis with Massive Effusion and Cardiac Tamponade.

H. Shumacker, junior, and J. Harris (*Surg., Gynec. & Obst.*, November, 1956) draw attention in their article to the occurrence of chronic idiopathic pericarditis with massive effusion and cardiac tamponade. They report two cases of this syndrome, which they treated by extensive pericardiectomy with remarkable improvement. As a consequence, they recommend extensive pericardiectomy as a procedure of choice in cases of chronic pericarditis with effusion and evidence of cardiac tamponade.

Free Peritoneal Grafts and Nylon Surfacing of Resected Liver Wounds.

A. Islami and G. Pack (*Surgery*, October, 1956) show from experimental work on mongrel dogs that free peritoneal grafts from the abdominal parietes furnish a most satisfactory means of covering a cut liver surface. They cause hæmorrhage to cease and heal without contractures or adhesions. They state that nylon is a poor substitute, and they do not recommend its use.

Hypophysectomy in the Treatment of Advanced Cancer of the Breast.

B. S. Ray and O. Pearson (*Ann. Surg.*, September, 1956) report results of 75 hypophysectomies in women with advancing cancer of the breast who had been operated on between March, 1954, and December, 1955. There were seven deaths in the first thirty days after

operation, though they state that only three could be directly attributed to the operation. In the 67 patients who survived operation, 36 had objective remission of their disease, and 31 were not benefited. The authors state that new remissions can be obtained by hypophysectomy in patients who have been temporarily benefited by castration, or by a combination of castration and adrenalectomy. Every patient who was temporarily benefited by castration obtained a new remission after hypophysectomy; and four of eleven patients, having had both castration and adrenalectomy, obtained a new remission from hypophysectomy. It is suggested by the results that if hypophysectomy is not employed as the initial ablative operation in altering endocrine influence on the disease, it is probably preferable to adrenalectomy as a second operation following castration. The survival period was more than twice as long in those patients who obtained a remission after hypophysectomy as in those who did not.

The Effects of Carbonic Anhydrase Inhibitor in Addison's Disease.

G. J. HAMUB AND D. B. BROWN (*Arch. Int. Med.*, June, 1956) discuss the effects of carbonic anhydrase inhibitor ("Diamox") in the management of Addison's disease. This substance was given to five patients with adrenal insufficiency in order to determine possible interrelationships between the action of carbonic anhydrase and the adrenal cortical steroids on renal tubular function. In four of the patients the administration of "Diamox" resulted in an increase in the urinary volume and total excretion of sodium, potassium and chloride. The fifth patient showed an increased urinary volume with no significant change in the electrolytes. Four of the five patients manifested symptoms of early adrenal crisis twelve to thirty-six hours after the administration of the "Diamox". The patients responded rapidly to replacement therapy. Two of the patients were given "Diamox" after they had been placed on maintenance steroid therapy. While showing the same urinary and electrolyte response, they did not manifest any untoward clinical signs or symptoms. The results indicate that the carbonic anhydrase mechanism can operate in the absence of physiological amounts of adrenal hormones, and that the ion-exchange mechanism in the kidney affected by the adrenal steroids can operate in the presence of "Diamox". The possibility is presented of using "Diamox" as an indirect test of the salt-retaining activity of the adrenal cortex.

NEUROLOGY AND PSYCHIATRY.

The Treatment of Myotonia.

L. A. LIVERSEDGE AND M. J. D. NEWMAN (*Brain*, September, 1956) discuss the treatment of myotonia. They state that quinine has been used for many years and is of definite value in the relief of the myotonia in *myotonia congenita*. Adrenal cortical steroids have been used in the treatment of this condition, and the authors undertook a trial using cortico-steroids and procaine amide. They evolved a simple and practical method of recording power and myotonia in the *flexor digitorum sublimis*, using a dynamometer constructed from a sphygmomanometer cuff attached to a mercury manometer. In order to record myotonia two ordinary electroencephalographic surface electrodes were placed over the muscle bodies of the long flexors of the fingers and leads taken into an eight-channel electroencephalograph. They treated ten patients suffering from dystrophia and one suffering from myotonia with cortisone, corticotrophin desoxycorticosterone acetate and procaine amide. Cortisone and corticotrophin reduced significantly the duration of myotonia in eight out of nine cases. In three of these cases the myotonia was virtually abolished. The muscle power was not affected. Quinine was less effective. DOCA and procaine amide had no effect on either power or myotonia. The authors conclude that treatment with cortisone is indicated only in those cases in which myotonia is the predominant symptom.

Complications of Chlorpromazine Therapy.

I. M. COHEN (*Am. J. Psychiat.*, August, 1956) studied the complications experienced in the treatment of 1400 patients with chlorpromazine during a period of fourteen months. The doses ranged from 40 milligrammes to 2500 milligrammes per day. "Complications" included all effects which, from the standpoint of the clinician, were considered undesirable regardless of the degree of severity. Drowsiness was in proportion to the dose, usually occurring when the daily dose was 200 milligrammes or more. Of the patients, 0·5% developed insomnia. Reduction in temperature was never greater than 1·6° F.; apparent only in the first week, it subsided with withdrawal of the drug. Occasionally elevation of temperature, delirium and Parkinsonism were experienced, but these effects seemed to disappear rapidly with withdrawal of the drug. Transient muscular spasms, such as torticollis, and muscular twitching were observed, as were also dysphagia and some difficulty in talking. The most significant cardiovascular effect was induction of hypotension. Facial pallor was often apparent after parenteral injection of the drug. Ankle œdema and increase in memory defect, thought to be due to hypotension, were noticed in a few cases. Nausea and heartburn occurred occasionally. Constipation was present in over one-third of the patients, while unusual increase of appetite was noted in over 40% of patients. Jaundice occurred in 0·9%. It was unrelated to dose, route of administration, age, sex or psychiatric diagnosis, but was higher in those with a history of allergic reactions. In the majority it occurred two and a half to three weeks after commencement of treatment. In the usual case there was a sudden elevation of temperature, with nausea and vague abdominal pains, jaundice commencing in two to five days. The symptoms subsided, and the jaundice cleared in two to three weeks. In one case it persisted for over one month. Localized or generalized pruritus was the most common dermatological reaction, mostly affecting the extremities. Dermatitis suddenly occurred after two weeks' treatment in 8% of cases; it was usually preceded by itching. The most common form was a maculo-papular eruption on face, neck and chest, upper extremities and thighs. Nasal congestion was present in 48% of cases, giving the impression that the patient had a cold. Dryness of the mouth and throat occurred in 76% of cases. Muscular weakness was complained of fairly often. Occasionally there were incoordination, tremor and ataxia. It was considered that patients receiving electroconvulsive therapy in addition to chlorpromazine developed confusional effects more easily than when electroconvulsive therapy was given alone.

Senescence, Senility and Alzheimer's Disease.

N. RASKIN AND R. EHRENBERG (*Am. J. Psychiat.*, August, 1957) studied the post-mortem findings in 270 unselected subjects, aged sixty to ninety-seven years, representing a cross-section of a large State hospital elderly population. Psychosis with arteriosclerosis was the diagnosis in 150 cases. The presence of arteriosclerosis was confirmed in all cases. The pia-arachnoid was usually opaque and thickened. There was usually a large focus of softening or many small foci. Only one patient had a few Alzheimer's neurofibrillary changes. A clinical group of 43 patients was studied. Most were diagnosed as suffering from senile brain disease, others had cerebral arteriosclerosis. Cerebral œdema and internal hydrocephalus were present. All had senile plaques in moderate numbers as seen microscopically. In another group of 26 patients, five were diagnosed as having Alzheimer's disease, the rest either cerebral arteriosclerosis or senile disease. Clinically this group showed an insidious onset of disease, motor unrest, spatial disorientation and aphasic disturbance ending in mutism in many cases. The profound dementia and aphasia had suggested Alzheimer's disease irrespective of the age or lateness of the onset. Histologically, 24 of this group were found to have numerous neurofibrillary changes, and all but one had senile plaques. The latter were found throughout the brain, overshadowing the mild arteriosclerotic changes that were present in some cases. A diffuse loss of ganglion cells and an enormous increase of amyloid bodies were recorded. The illness had commenced one to five years prior to the patient's admission to hospital. The last group, a miscellany of 51, was nearly equally divided into those with functional and those with organic psychosis. In the latter group 15 had some arteriosclerosis, 12 had senile plaques and a few had Alzheimer's fibrillary changes. It is concluded that senile plaques belong to the signs of old age like grey hairs, but it is uncertain whether Alzheimer's fibrillary changes have been seen in normal old people. The degree of brain atrophy was not always indicative of the patient's mental deterioration.

British Medical Association News.

MEETING OF THE FEDERAL COUNCIL.

A meeting of the Federal Council of the British Medical Association in Australia was held at the British Medical Association House, 135 Macquarie Street, Sydney, on February 22, 23, 24 and 25, 1957, Dr. H. C. Colville, the President, in the chair.

Minutes.

The minutes of the Federal Council meeting of August 27, 28 and 29, 1956, which had been circulated amongst members, were taken as read and signed as correct.

Representatives.

The following representatives of the Branches were present:

New South Wales: Dr. W. F. Simmons, Dr. A. J. Murray, Dr. E. F. Thomson, Dr. R. H. Macdonald.

Victoria: Dr. H. C. Colville, Dr. R. Southby, Dr. J. G. Johnson.

Queensland: Dr. A. E. Lee, Dr. J. G. Wagner.

South Australia: Dr. L. R. Mallen, Dr. C. O. F. Rieger.

Western Australia: Dr. C. W. Anderson, Dr. D. M. Clement.

Tasmania: Dr. J. B. G. Muir, Dr. L. N. Gollan.

Deaths.

At the outset of the meeting, the President referred to the death since the previous meeting of the Federal Council of two former members of the Council, Sir John Newman-Morris and Dr. F. W. Carter. He mentioned that Sir John Newman-Morris, C.M.G., who had died on January 3, 1957, had been a member of the Federal Committee and Vice-President from 1929 to 1933, and a member of the Federal Council and Vice-President from 1933 to 1938. Dr. F. W. Carter, who had died on December 17, 1956, had been a member of the Federal Council from 1937 to 1952. The members of the Council stood in silence as a mark of respect to Sir John Newman-Morris and Dr. F. W. Carter.

Appointment of Office-Bearers.

As only one nomination for the position of President had been received, that of Dr. H. C. Colville, Dr. Colville was declared elected.

Only one nomination was received for the position of Vice-President, that of Dr. A. J. Murray. The President declared Dr. A. J. Murray elected.

Only one nomination was received for the position of Honorary Treasurer, that of Dr. W. F. Simmons. The President declared Dr. Simmons elected.

Annual Report.

The General Secretary presented the annual report of the Federal Council for the twelve months ended December 31, 1956. This report was received.

Secretariat.

The President welcomed to the meeting Dr. A. McNeil, who had commenced duties as Assistant General Secretary of the Federal Council on February 4, 1957.

Dr. Mervyn Archdall.

The President expressed regret at the absence from the meeting of Dr. Mervyn Archdall, Editor of The Medical Journal of Australia, owing to illness, and mentioned that Dr. Archdall had been attending the meetings of the Federal Council ever since he (the President) had been a member, and had not missed a meeting. The President said that the standard of reporting of the meetings in The Medical Journal of Australia had been consistently high, and had provided an excellent summary of what had taken place at the Council meetings. The following resolution was adopted on the motion of the President:

> The Federal Council wishes to record its great appreciation of the services to the Association and the whole of the medical profession in Australia of Dr. Mervyn Archdall in his many years as Editor of The Medical Journal of Australia and hopes that he will long enjoy his well-earned leisure.

The President welcomed to the meeting the Deputy Editor of The Medical Journal of Australia, Dr. Ronald Winton.

Finance.

The financial statement of the Federal Council as at December 31, 1956, was presented by Dr. W. F. Simmons, the Honorary Treasurer, and adopted. Dr. Simmons pointed out that the accumulated funds of the Federal Council were above the minimum essential reserve, but that there would be further commitments in the coming year. In particular, it was desirable to provide for the expenses of a delegate to the next meeting of the World Medical Association, and provision would have to be made for the salary and superannuation of Dr. McNeil. Referring to the funds standing to the credit of the Australasian Medical Congress (British Medical Association), Dr. Simmons pointed out that the Sydney Congress had added substantially to these, and had left them in a very healthy condition. However, it was necessary to have reserves to provide for congresses in the smaller States, and a considerable sum had already been advanced to the Executive Committee of the Tenth Session of Congress, to be held in Hobart in 1958. The financial statement was adopted.

It was resolved to invest £4000 of the balance standing to the credit of the Australasian Medical Congress (British Medical Association) in short-term Commonwealth loan.

Presenting a statement of the per-capita payments of the Branches for the year 1957, Dr. Simmons expressed the view that the present position was satisfactory. However, the capitation fee, which at present stood at £1 5s. per member, would possibly have to be increased within the next year or two. The statement was approved and adopted.

Dr. Simmons also presented a statement showing the position of the Organization Fund for the period ended December 31, 1956. The amount standing to the credit of the fund was £1541.

Dr. Simmons presented a statement showing the position of the Federal Independence Fund, as at December 31, 1956. The amount standing to the credit of the fund was £22,365.

In presenting a statement of the Entertainment Fund for the year ended December 31, 1956, Dr. Simmons pointed out that the credit balance stood at £263.

It was resolved to increase the travelling insurance cover on members of the Federal Council and officers and staff of the Council travelling on business of the Council from £10,000 to £20,000. It was pointed out that this increase brought the provision within the range adopted by other similar bodies.

Henry Simpson Newland Prize in Surgery.

Dr. Simmons presented the financial statement for the Henry Simpson Newland Prize Fund for the year ended December 31, 1956. The amount standing to the credit of the fund was £1068.

Medical Officers Relief Fund (Federal).

On behalf of the trustees of the Medical Officers Relief Fund (Federal), Dr. Simmons presented a report for the year ended December 31, 1956. The total assets of the fund as at December 31, 1956, amounted to £7274. During the year, the sum of £414 had been paid to four beneficiaries. One loan of £700 was in existence at December 31, 1956. The report was adopted.

Federal Medical War Relief Fund.

On behalf of the trustees of the Federal Medical War Relief Fund, Dr. Simmons presented a report for the year ended December 31, 1956. The total assets as at December 31, 1956, amounted to £17,973. Assets had decreased during the year by £397. Amounts paid to twelve beneficiaries during the year had amounted to £914. The report was adopted.

Honours.

The President referred to New Year Honours which had been conferred by Her Majesty the Queen on members of the medical profession in Australia. Dr. J. G. Hunter had been created a Companion of the Most Distinguished Order of St. Michael and St. George, Surgeon Rear Admiral Lionel Lockwood, Dr. R. Whishaw and Dr. P. L. Bazeley had been created Commanders of the Most Excellent Order of the

British Empire, and Dr. George Simpson and Dr. H. J. C. Hanrahan had been created Officers of the same order. The President said that letters of congratulation had been sent to Surgeon Rear Admiral Lockwood, Dr. Whishaw, Dr. Bazeley, Dr. Simpson and Dr. Hanrahan. However, he wished especially to express the pleasure of the Federal Council at the honour conferred on Dr. J. G. Hunter. He said that few distinctions had been more truly earned and more well deserved. The following resolution was adopted:

> That this Council record its great gratification at the honour which has been conferred by Her Majesty the Queen on the General Secretary of the Federal Council, Dr. J. G. Hunter, and offers him its sincerest congratulations.

Inquiries from Overseas About Medical Practice in Australia.

The General Secretary reported that he had received sixteen inquiries from medical practitioners overseas in regard to conditions of practice in Australia. In each case he had supplied the inquirer with suitable information.

Biennial Conference of the New Zealand Branch.

The General Secretary presented the correspondence which had been received from the New Zealand Branch of the British Medical Association with regard to the programme for the Biennial Conference of the Branch which was held from February 19 to 22, 1957. He said that Dr. E. F. Thomson had been appointed as the representative of the Federal Council at the Conference. Dr. Thomson reported briefly on his visit to the Council, and commented that he had found the problems of the medical profession and the medical services in New Zealand much the same as they were in Australia.

Supplies of Anæsthetic Apparatus and Ancillary Equipment.

The General Secretary reported that he had received a letter from the New South Wales Branch, forwarding a letter received from the Section of Anæsthesia, regarding the difficulty experienced by Commonwealth Industrial Gases Limited in obtaining supplies of anæsthetic apparatus and ancillary equipment, as the result of import restrictions. The General Secretary reported that he had referred the matter to the Director-General of Health, who had taken the matter up with the Department of Trade. The Department of Trade had explained the position with regard to the matter raised, and had given an assurance that every effort would be made to keep the necessary machines and parts available.

Australian Association of Psychiatrists.

The General Secretary reported that he had received an inquiry from the Australian Association of Psychiatrists regarding the amounts allowable as taxation deductions when members incurred expenses by attending scientific meetings, congresses and the like. The General Secretary reported that he had explained the position fully, which was, in effect, that such deductions could be claimed only by self-employed persons.

Inquiry had also been made by the same Association regarding registration, membership of the British Medical Association and housing for medical practitioners moving from overseas to Australia, and from State to State in Australia. The General Secretary said that he had sent a suitable reply.

The Fellowship for Freedom in Medicine (Limited), London.

The General Secretary reported that he had received a letter from the Chairman, Dr. R. Hale-White, of the Fellowship for Freedom in Medicine (Limited), London. Dr. Hale-White had asked for information about voluntary insurance organizations in Australia providing benefits in respect of general practitioners' services. The General Secretary had replied, explaining the position in Australia.

The Nuffield Foundation.

The General Secretary said that he had received a letter from the Nuffield Foundation, seeking information about terms and conditions of service agreed upon between the British Medical Association and the Commonwealth Government in respect of services rendered by medical practitioners. He had sent a full statement of the position in Australia, and had received a letter of thanks from the Nuffield Foundation in appreciation of the extensive information provided.

The Pharmaceutical Association of Australia.

The General Secretary referred to a letter from the Pharmaceutical Association of Australia, with which they forwarded a copy of a letter sent to the Director-General of Posts and Telegraphs. In the letter they had referred to the indiscriminate mailing by manufacturers of samples of potentially dangerous drugs, and to the dangers, especially to small children, when packages containing such drugs were left in mail boxes on the street, on the top of mail boxes or in other exposed positions. The Pharmaceutical Association of Australia had inquired of the Director-General of Posts and Telegraphs if it would be feasible to provide by regulations that no person should send through the mails any drug or preparation which was considered a dangerous or narcotic drug, specified drug or restricted drug under any of the laws of the State or Territory of the Commonwealth, except to a registered medical practitioner, registered pharmaceutical chemist, registered veterinary surgeon or registered dentist, or in pursuance of a written request or order given by such persons. They agreed that, of course, medicines dispensed on doctors' prescriptions by pharmaceutical chemists, when posted to the patient, or to someone else on behalf of the patient, would need to be exempted from any such requirement. They had also inquired whether regulations could be made which would require that packages containing the class of drug or preparation mentioned should be sent through the mail only by registered mail.

The General Secretary said that the letter, from the Pharmaceutical Association of Australia, in which they had requested support from the British Medical Association, had been sent to the Branches. The New South Wales and Victorian Branches had supported the representations of the Pharmaceutical Association of Australia. The South Australian Branch had expressed opposition. The Western Australian Branch had reported that they had had no trouble with the matters raised. The Queensland Branch had considered that an approach should first be made to the drug firms. The Tasmanian Branch had agreed with the principle of the letter from the Pharmaceutical Association, but not with the idea that packages should be sent by registered mail.

In discussion, some opposition was expressed to the idea of sending drugs under registered cover, on the grounds that this would cause general inconvenience and perhaps lead to a rise in the cost of drugs, but it was finally decided that the Federal Council should support the representations of the Pharmaceutical Association of Australia.

South African Medical and Dental Council.

The General Secretary said that he had received a letter from the South African Medical and Dental Council, in which they had asked if there were any restrictions on the rights of medical practitioners to dispense medicines in Australia. The matter had been referred to the Branches, who had supplied the information as it related to their own States, and the South African Medical and Dental Council had been advised accordingly. No restrictions were imposed in Queensland, New South Wales, Victoria, South Australia and Tasmania, and only certain limited restrictions were imposed in Western Australia.

Australian Advisory Council for the Physically Handicapped.

The Australian Advisory Council for the Physically Handicapped had sent information about the Seventh World Congress of the International Society for the Welfare of Cripples, to be held in London from July 22 to 26, 1957, and asked that the information be forwarded to the Branches. The General Secretary said that that had been done.

Second International Congress for Social Medicine.

A letter had also been received regarding the Second International Congress for Social Medicine, to be held in Vienna from May 31 to June 2, 1957, and the information had been sent to the Branches.

Fifth International Congress of Therapeutics.

Information had also been sent to the Branches regarding the Fifth International Congress of Therapeutics, to be held in Utrecht from June 4 to 6, 1957.

PHILIPPINE MEDICAL ASSOCIATION AND THE ASIAN CONFEDERATION OF MEDICAL ASSOCIATIONS.

A letter was received from Dr. J. K. Maddox, with which he forwarded copies of the proceedings of the meeting of the Philippine Medical Association and the Asian Confederation of Medical Associations in Asia, which he had attended with Dr. L. R. Mallen.

The General Secretary referred to a letter addressed to Dr. Mallen, in which the Federal Council was asked if the British Medical Association in Australia was prepared to send a representative to attend a meeting of the Asian Confederation of Medical Associations in Asia, to be held in Japan in 1959. It was decided to inform the Confederation that the Federal Council found it impracticable at present to appoint a delegate to attend the meeting in Japan, but had appointed the General Secretary, Dr. J. G. Hunter, to act as corresponding delegate for the time being.

STATISTICAL BULLETINS FROM THE DEPARTMENT OF IMMIGRATION.

The General Secretary said that he had received Statistical Bulletins numbers 19, 20 and 21 from the Department of Immigration.

HUNTER HOUSE RESTORATION COMMITTEE.

The General Secretary read a letter that he had received from the Hunter House Restoration Committee, in which an appeal was made for funds for the renovation of the birthplace of William and John Hunter at Long Calderwood, East Kilbride, Scotland. The idea was to build up a fund sufficient to ensure that the birthplace of the Hunters was kept in good order, and possibly to initiate and carry on some research work. It was decided to refer the matter to the Branches, with a request that any donations received be forwarded to the Federal Council for transmission to the Hunter House Restoration Committee.

DR. F. G. DICKINSON.

The General Secretary reported that Dr. F. G. Dickinson, of the Bureau of Medical Economic Research of the American Medical Association, had arrived in Sydney on January 31, 1957, and would be spending some time in Australia.

MEMBERS OF THE BRITISH MEDICAL ASSOCIATION IN THE NORTHERN TERRITORY.

A letter was received from the Queensland Branch, inquiring to what Branch a member of the Association in the Northern Territory should belong. After discussion, it was decided that the *status quo* should be maintained—namely, that members of the Association within the Northern Territory should have the option of belonging to any Branch in Australia that they desired.

AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

Tenth Session.

A letter was received from the Executive Committee, forwarding a list of office-bearers for the Tenth Session of the Australasian Medical Congress (British Medical Association), to be held in Hobart from March 1 to 7, 1958. The Executive Committee had also inquired about the procedure in relation to the nomination of Presidents and Vice-Presidents of Sections. The General Secretary had explained that nominees of Branches for the position of President who were not elected to that office by the Executive Committee were customarily made Vice-Presidents. However, the Victorian Branch preferred to make separate nominations for the positions of Vice-Presidents, and it had been agreed to waive the usual rule so far as Victorian nominees were concerned.

The Honorary Treasurer, Dr. W. F. Simmons, said that he had made available a second sum of £1000 for the payment of the preliminary expenses of the Tenth Session of Congress. The Council approved his action.

The General Secretary read correspondence that had taken place with the College of General Practitioners regarding the inclusion of a Section of General Practice at the Tenth Session of Congress. The College of General Practitioners had been advised that the Executive Committee of Congress was responsible for deciding what sections should be included. The College had then communicated with the Executive Committee, which had decided that, because of the very limited accommodation available for the Tenth Session, it would not be practicable to include a new Section of General Practice. In response to a further request from the College of General Practitioners that a Section of General Practice be constituted at the Eleventh Session of the Australasian Medical Congress, or at whatever type of meeting was to be held in 1961, it was decided to refer the question to the Branches for consideration.

AUSTRALASIAN MEDICAL PUBLISHING COMPANY LIMITED.

The General Secretary read a letter from the Directors of the Australasian Medical Publishing Company Limited, advising that there would be no alteration in the per-capita payment of £1, 10s. of which was for the supply of THE MEDICAL JOURNAL OF AUSTRALIA, and 10s. for credit to the building fund trust account.

Dr. W. F. Simmons pointed out that the 10s. allowed for the supply of THE MEDICAL JOURNAL OF AUSTRALIA did not even cover postage, so that members actually received the journal free. He also announced that in future debenture solders were to receive 6½% interest instead of 5%, as it had been in the past.

The General Secretary reported that on behalf of the Publishing Company he had made representations to the Commonwealth Government with a view to obtaining an import licence for printing machinery in the form of an automatically fed gatherer-stitcher-trimmer. The Acting Minister for Trade, however, advised that the application for an import licence had been refused.

The General Secretary read a letter from the Secretary of the Australasian Medical Publishing Company Limited, enclosing a letter from Dr. Harvey Flack, the editor of *Family Doctor*, the medical magazine produced by the Parent Body for sale to the general public. Dr. Flack's letter, which was addressed to Sir Henry Newland, the Chairman of Directors of the Australasian Medical Publishing Company Limited, referred to previous negotiations which had been carried on about the publication of an Australian edition of *Family Doctor*, and asked if the matter could again be taken up. The General Secretary pointed out the value, from the point of view of public relations, of having a magazine for lay distribution in the control of the British Medical Association, but agreed that it was not necessarily practicable to produce such a magazine in Australia. He also referred to the fact that having the name of the Association on the cover of the magazine might have undesirable complications and would be best avoided. In response to two specific questions asked by the Directors of the Australasian Medical Publishing Company Limited, the Federal Council resolved that it did not approve of the circulation under the ægis of the British Medical Association in Australia of an Australian edition of *Family Doctor*; nor did it approve of the production by the Australasian Medical Publishing Company Limited of a popular health journal at the present juncture. However, it asked the Australasian Medical Publishing Company Limited to submit to the Federal Council at a future date its ideas on the suitable format for publication in Australia of a popular health journal.

MEDICAL PLANNING.

National Health Service.

During the meeting of the Federal Council, the Minister for Health, Dr. Donald Cameron, made a short visit, accompanied by the Director-General of Health, Dr. A. J. Metcalfe. The opportunity was taken to discuss informally various aspects of the National Health Service.

National Health Act, 1953-1956.

The General Secretary referred to an amendment to Section 20 of the *National Health Act*, 1953-1955, by the omission from paragraph (a) of the words "*Repatriation Act*, 1920-1953", and the insertion instead of the words "*Repatriation Act*, 1920-1956, the *Repatriation (Far-East Strategic Reserve) Act*, 1956".

At its previous meeting in August, 1956, the Federal Council had reaffirmed its objection to the payment of benefits for X-ray and pathological services at public hospitals when the services were otherwise available from private practitioners, and had taken strong exception to the amendment to Section 19 of the *National Health Act*, 1953-1955, which permitted payment for benefits for all medical services rendered in public hospitals and territories of the Commonwealth, excluding Canberra Community Hospital in the Australian Capital Territory. The General

Secretary said that those views had been conveyed to the Minister for Health, but no steps had been taken to make further amendment to Section 19. He read a letter from the College of Radiologists of Australasia, in which they requested that steps be taken to provide that benefits should not be payable in public hospitals for radiological services when such services were available from private radiologists, and it was decided to make a further protest to the Minister for Health in regard to the amendment of Section 19.

Further discussion took place on the question of the right of appeal against all penalties against medical practitioners under the *National Health Act*. At the Council meeting in August, 1957, it had been decided to inform the Minister for Health that the Council was firmly of the opinion that there should be such a right of appeal. The decision of the Minister in the matter was awaited.

Pensioner Medical Service.

At the meeting of the Federal Council held in August, 1956, the Council approved a letter to the Minister for Health, under the signature of the President of the Federal Council, in which the Council expressed its unwillingness to enter into an agreement with the Commonwealth Government for the provision of medical services to pensioners on the terms offered by the Minister in a previous letter of May 2, 1956. The Council reiterated its request that the remuneration for medical practitioners carrying on the service should be 12s. 6d. for a surgery consultation and 15s. for a domiciliary visit. In accordance with a suggestion made by the Minister in a letter to the President, a series of facts was submitted in support of the Council's request. These were set out in full in the letter (see THE MEDICAL JOURNAL OF AUSTRALIA, October 6, 1956, page 536). The Council further resolved at that meeting that if the Minister's reply was unfavourable, the Council should communicate this information to the Branches, to inform them that the Council had done its best to improve the conditions of the Pensioner Medical Service, and had failed to do so, and should request advice from the Branches about any further action they might desire the Council to take.

In a reply to the President's letter, dated September 19, 1956, the Minister for Health stated that he was reluctantly forced to the conclusion that, when everything was taken into consideration, an increase in fees was not justified. He then set out the considerations on which the Government's view was based.

The matter was then referred to the Branches in terms of the Federal Council's resolution. In reply, the New South Wales Branch recommended that the profession continue to work at the present rates without an agreement for a period of six months, but that in the meantime the Federal Council should continue to press for an increase in the rates of remuneration. The Victorian Branch Council considered that the Federal Council had done everything possible in negotiating with the Minister in regard to the Pensioner Medical Service, and that no further action could reasonably be taken by the Federal Council at the present juncture; they had decided to inform the members of their Branch of the present position in regard to the Pensioner Medical Service, and request the opinion of members about further action that should be taken. The South Australian Branch felt that the Federal Council should continue to press for an increased level of fees, but stated that in the meantime members would continue to render medical services to the pensioner group, pending arrival at a new agreement after further negotiation with the Minister. The Western Australian Branch was not prepared to accept the position outlined in the Minister's letter, but would recommend to its members that they continue to provide treatment under the Pensioner Medical Service as before. The Tasmanian Branch advised that its members were prepared to continue to work the Pensioner Medical Service, but under protest, and recommended that it might be desirable to arrange a temporary contract with the Government in the meantime.

After further discussion, the Federal Council decided to reiterate its request to the Minister for Health for an increase in the rates of payment from 10s. and 12s. 6d. to 12s. 6d. and 15s., and to send to the Minister a further letter signed by the President.

The Victorian Branch forwarded the suggestion of a member that a request be made for an increase in fees only in respect of the visiting fee. However, the President considered that no modification in the claim for an increase could be considered as having a mandate from the Branches.

The Western Australian Branch forwarded a copy of correspondence with the Minister for Health, in which they had requested that the attention of the Medical Services Committee of Inquiry when it met early in 1957 be directed to the difficulty experienced by the doctor in dealing with unreasonable pensioner patients. The Minister had replied that everything possible was being done for the education of pensioners, but that he considered that such education could best be carried out by the pensioners' medical attendants. The Western Australian delegates explained that no action was desired from the Federal Council on the matter, but they thought it was a matter that should be considered by the Federal Committee of Inquiry.

A letter was received from the Queensland Branch, suggesting the policy to be adopted relating to public statements made concerning the Pensioner Medical Service. They included, *inter alia*, the following points: (i) that any suggestion that members of the profession were in any way responsible for the rising costs of the Pensioner Medical Service should be flatly denied; (ii) that it should be emphasized that the only significant cause of the rising costs was the rising demand by pensioners; (iii) that the fact that doctors were giving a concessional service, something no other section of the community did, should be emphasized at every opportunity.

A letter was received from the Minister for Health, in reply to a recommendation from the Federal Council that steps be taken to ensure that the widow of a deceased pensioner, whether invalid or old age, should be entitled to medical services under the Pensioner Medical Service until such time as eligibility to receive the service under her own right was established. The Minister said that he had approved the adoption of a procedure whereby it would be possible to implement the Federal Council's suggestion. The Minister advised that under an altered procedure the entitlement card of a deceased age, invalid or service pensioner or a tuberculosis allowee would not be recalled in future when it appeared that the widow was eligible for a widow's pension, which would be payable from the date of her husband's death, and that she was eligible for the Pensioner Medical Service. When the widow's pension was granted, her late husband's entitlement card would be replaced by one issued in her name. When the recall of an entitlement card had been so deferred, action to recover it would be taken immediately it became evident that the widow was ineligible for the Pensioner Medical Service, or at the expiration of twenty-eight days after her husband's death if the widow had not applied for a pension within that period. When a widow's eligibility for the Pensioner Medical Service was doubtful, the entitlement card would be recalled as at present on the death of her husband. The Minister's reply was regarded as satisfactory.

The General Secretary reported the receipt of further lists of medical practitioners willing to provide medical services to pensioners.

The General Secretary drew attention to a number of notifications in the *Commonwealth of Australia Gazette* relating to reprimands and disallowances of claims of medical practitioners.

General Pharmaceutical Benefits.

The General Secretary referred to a number of submissions that had been received through Branches and societies regarding general pharmaceutical benefits. A number of representations related to the shortage of "Ansolysin". The matter had been taken up with the authorities, and the shortage had since been remedied. Other requests had been that "Dilantin Suspension" be placed on the restricted list for the treatment of epilepsy in children, that "Penicillin V" oral tablets be placed in the first schedule and not in the second schedule (restricted drugs), that the number of tablets of "Diamox" be increased from 25, that half-litre intravenous solutions be added to the list of pharmaceutical benefits, that the cortisone group of drugs be available for use in diseases of the eye which required general cortisone therapy, such as irido-cyclitis and uveitis, that nitrofurantoin ("Furadantin") be added to the list of restricted drugs, and that tranquillizing drugs be placed on the list of pharmaceutical benefits. The General Secretary said that all these requests had been passed on to the Director-General of Health.

In response to a request from the South Australian Branch, the Federal Council at its August meeting resolved that representation should be made to the Minister for Health that the cost of antibiotic sensitivity tests should be borne by the Commonwealth Government. In reply, the Minister had suggested that the matter should wait until the revised antibiotics work-sheet was available. Dr. Edgar Thomson reported that the work-sheet had been completed,

but would not be made available until it had been presented to the National Health and Medical Research Council, which would meet in May, 1957.

The General Secretary drew attention to notices in the *Commonwealth of Australia Gazette* relating to the revocation of authority of a medical practitioner to write a prescription for the supply of pharmaceutical benefits and to supply pharmaceutical benefits, and to the reprimand of a medical practitioner for conduct which was a contravention of the National Health (Pharmaceutical Benefits) Regulations.

Dr. W. F. Simmons referred to complaints received by the New South Wales Branch about the frequent issue of amendments to the list of pharmaceutical benefits. It was suggested that such amendments need not be issued more than three times a year. The General Secretary said that he would take the matter up with the Director-General of Health.

Medical Benefits.

At the meeting of the Federal Council in August, 1956, a committee was set up consisting of Dr. A. E. Lee and Dr. J. G. Wagner to investigate the anomalies in the schedules of benefits which had been brought forward by the Branches, and correlate those lists of anomalies. A committee of the New South Wales Branch, consisting of Dr. E. S. Stuckey, Dr. K. S. Jones and Dr. D. A. Brown, also prepared a report on the anomalies in the schedules of benefits. Dr. Lee reported that after examination of the New South Wales list, he and Dr. Wagner had decided to use the New South Wales list as the basic report and to present separately a list of those points on which his own committee either differed from or added to that report. He referred to a number of controversial points in the lists, and after discussion and suitable amendment of the lists, the Federal Council adopted the combined report of the two committees with a view to having it sent on to the Director-General of Health. The thanks of the Federal Council were offered to Dr. Lee and Dr. Wagner, and to Dr. Stuckey, Dr. Jones and Dr. Brown for the work that they had done in preparing the reports.

In response to a series of recommendations from the New South Wales Branch, the Federal Council resolved that representation should be made to have an increase from seven to ten in the number of consultations in respect of ante-natal care for which medical benefits were paid, and to have the government benefit for obstetric services increased from £3 15s. to £4 10s. It was also decided to ask the Federal Government to review the schedule of benefits with a view to securing a general increase in benefits payable, and especially with a view to easing the restrictions which applied to the upper limit of fund benefits. It was considered that there were quite a number of benefits which were inadequate, and that the medical benefits funds should not be restricted by the Government if they wished to increase the upper limits of benefits in certain cases. That, of course, was subject to the proviso that the Government must have the right to determine that the organizations were actuarily sound. It was also decided to make representations to medical benefits organizations that they should provide an optional higher table of benefits.

A communication was received from the New South Wales Branch, giving details of a case in which a patient had been examined by an ophthalmologist for an ocular condition, and, in the course of the examination, a refraction had been carried out. Glasses had not been prescribed, but payment of a medical benefit was subsequently refused. It was considered that this was an anomalous interpretation of the provision of the first schedule relating to examination of a patient's sight, and the Council resolved to make representations to the Minister for Health that when an ocular service was rendered and refraction carried out at the same time, and no glasses were prescribed, benefits should be payable.

A general discussion took place on the question of the definition of a specialist, and reference was made to the difficulty in reconciling the various definitions that had been put forward by different bodies. It was agreed that from the Federal Council point of view, the definition of a specialist was of no particular importance, but that it did matter to medical benefits funds in the administration of claims made on the schedule of benefits. It was decided to adhere to the definition of a specialist laid down at the meeting of the Federal Council on August 30, 1954, with the one amendment that such a specialist should have had a minimum period of three years' practical experience in the specialty, or such greater period as might be laid down as the necessary period of training by the specialist bodies concerned.

Discussion also took place on the question of a list of specialties, and it was decided to accept the list set out in the schedules of the Queensland *Medical Act*. This embodied the following: medicine (physician), surgery (surgeon), hygiene (public health, State medicine, general hygiene, tropical hygiene), pædiatrics (diseases of children), psychiatry (nervous and mental diseases), dermatology (skin diseases), venereal diseases, tropical diseases, oto-rhino-laryngology (diseases of the ear, nose and throat), ophthalmology (diseases of the eye), gynæcology (diseases of women), orthopædics (*deformities, diseases and injuries* of bones and joints), urology (genito-urinary diseases), obstetrics (midwifery), anæsthetics (anæsthetist), pathology, biochemistry, plastic surgery, radiology (diagnostic X-ray examinations), radiotherapy (X-ray and radium treatment), allergy.

Bulletin of Statistics Relating to Medical and Hospital Benefits Schemes.—The General Secretary referred to the copy of the third edition of the Bulletin of Statistics relating to the medical and hospital benefits schemes which had been received from the Director-General of Health. Copies of these had been distributed to all members of the Federal Council. The statistics presented related to the Medical Benefits Scheme from July 1, 1953, and to the Hospital Benefits Scheme from January 1, 1952.

Stabilization of Fees.—The General Secretary read a letter from the Tasmanian Branch Council, in which they advised that the following minimum basic fees had been approved to be charged in Tasmania: consultations at the surgery, 17s. 6d.; visits at home, 22s. 6d.; out of hours, at week-ends and on holidays, 27s. 6d.

Vaccination Against Poliomyelitis.

The General Secretary referred to the resolution passed at the previous meeting of the Federal Council in August, 1956, relating to vaccination against poliomyelitis. It was decided to inform the Minister for Health that the Federal Council considered that syringes used in the Salk mass-immunization campaign should not exceed a capacity of two cubic centimetres, and that arrangements for the collection of specimens, the completion of the surveillance form and payment for the same should be a matter for discussion with the Commonwealth Department of Health. The General Secretary said that he had discussed the matter with Dr. Metcalfe, the Director-General of Health, who had said that the Commonwealth would not interfere, as the mass-immunization campaign was entirely a matter for State organizations.

Hospital Policy.

The General Secretary referred to a communication from Professor Sam B. Hatfield, the Professor of Hospital Administration in the New South Wales University of Technology, with which he had enclosed a copy of a prospectus of a course in hospital administration. It was explained that the School of Hospital Administration had been established at the New South Wales University of Technology, as the result of a grant of £55,000 from the Kellogg Foundation. It had been previously offered to the University of Sydney, but the Faculty of Medicine had not favoured its acceptance. The question had been raised of the disability under which medical graduates laboured if they wished to undertake the course. There were two types of course, one for a master's degree for students who already held a bachelor's degree in any discipline, and a second course, the "certificate one", for students already working in hospitals. The certificate course would occupy only one academic year, but the course for the master's degree, which would be that normally undertaken by medical graduates, extended over a three-year period; it was considered that a course of such length added to the six years of the medical course would place a medical practitioner at a disadvantage as compared with graduates in other faculties whose university course was of much shorter duration. In view of the training and qualifications already possessed by a medical graduate, it was considered that some modification of the course in hospital administration should be possible for them, and so allow for a shortening of the course. The General Secretary said that the authorities of the University of Technology had shown a sympathetic and understanding attitude towards this, and it was hoped that suitable modification would be made. The question of the opening up of the field of medical administration to lay people as a result of the course was also discussed; but it was agreed that, while the Federal Council was strongly in favour of the senior administrative posts in major hospitals being held by medical graduates, there were a large number of small.

hospitals in which this was not practicable, and it was reasonable that lay administrators should be trained for this purpose. However, the principle of the course was good, and it was hoped that it would be a means of persuading more medical graduates to undertake hospital administration. It was thought advisable to take an interest in the course, with a view to ensuring that it was suitably modified. The General Secretary pointed out that it was likely that if medical graduates decided to undertake the course, the hospitals with which they were connected would probably give them facilities to carry on their training. After further discussion, the Federal Council decided to support the idea of a course of hospital administration, but to take steps to request that the conditions which would apply to medical practitioners undertaking the course at the New South Wales University of Technology should be modified. The President pointed out that at the present stage only broad matters of policy were under consideration, and details could not be considered.

Occupational Health in Australia.

The General Secretary referred to the extra copies which had been sent by the Honorary Secretary of The Royal Australasian College of Physicians, setting out the results of the report of their committee on occupational health in Australia. After consideration of the report, the Federal Council decided to support the recommendations contained in the report, conditionally upon the insertion of the word "industrial" in Recommendation 4, so that the phrase concerned would read "private industrial practice".

Television in Relation to Health Education.

Reference was made to a resolution passed at the August, 1956, meeting of the Federal Council, in which the Federal Council expressed the opinion that, while they recognized that public education on selected health matters was eminently desirable, close liaison should be established between the British Medical Association and the Australian Broadcasting Commission to control the selection of subjects and the scope of material presented to the public, and that practitioners approached to appear in such programmes, whether for "sound" or "visual" broadcasting, should insist on anonymity as part of the contract.

The General Secretary reported that he had written to the Australian Broadcasting Commission, and they had said that they would be pleased to accept the cooperation of the British Medical Association. A difficulty, however, had arisen in relation to the anonymity of those appearing on programmes. The Australian Broadcasting Commission was of the opinion that the naming of those who appeared was vital to the success of programmes.

Dr. Angus Murray suggested that to insist on anonymity for doctors who were not in private practice seemed a little extreme. Dr. L. R. Mallen said that in the United States of America anonymity had been abandoned altogether. The sessions conducted by medical men on American television were very good, and it was considered that the announcement of their names was essential, although no personal publicity for the man concerned was carried on. No trouble had resulted from that policy. Although the official policy of the British Medical Association in England was in favour of anonymity, officers of the Association there were coming to believe that anonymity must be abandoned, as the result of experience. If television programmes were to be effective, he thought that in Australia there was a chance of getting in early, and that it would be wise to drop anonymity at the present stage. The President pointed out that the basis of the policy on anonymity had been to ensure that the private practitioner should not have a chance for self-advertisement. It seemed reasonable that that ban might be relaxed immediately for those not in private practice. Dr. A. E. Lee suggested that the attitude to television should be that taken to public lectures—in other words, that anonymity would not necessarily be required, but that permission should be obtained from the Branch Council before a member of the British Medical Association appeared. The President suggested that some directive or guidance to the Branch Councils was needed from the Federal Council. Dr. Mallen pointed out that the American Medical Association insisted on having the opportunity to go over all programmes to see that they were medically sound, and that the man who was carrying on the television broadcast knew his subject. Dr. Edgar Thomson expressed the view that it was necessary to rewrite the code of ethics of the profession in the light of modern life, otherwise the British Medical Association would be ignored. It would be better, under the circumstances, to relax the ban on the use of names for everybody. Dr. Wagner supported the view of Dr. Lee, that practitioners should be allowed to appear on television under their own names, but not without the permission of the Branch.

It was then decided to rescind the previous resolution of the Federal Council, and to substitute a resolution stating that while it was recognized that public education on selected health matters was eminently desirable, the Federal Council was of the opinion that a close liaison should be established between the British Medical Association and the Australian Broadcasting Commission to control the selection of subjects and the scope of material presented to the public on television; practitioners approached to appear in such programmes must obtain the approval of the State Branch of the British Medical Association for such appearance, and for the subject matter of the broadcast; provided such approval was obtained, anonymity need not necessarily be observed.

On the question of the nomination of doctors to serve on the supervisory and planning committee, the General Secretary reported that nothing had yet been settled.

Public Relations.

The General Secretary referred to a letter from the Western Australian Branch, in which attention was drawn to an article appearing in a local newspaper which criticized the amount of the rebates under the medical benefits scheme and the failure of the Government to increase the cover for such things as operations. The article quoted an officer of the Commonwealth Government as having said that if benefits were increased, the doctors would increase their fees. The General Secretary said that he had communicated with the journalist, and later had obtained a public denial by the Minister for Health of the statement alleged to have been made by the officer of the Commonwealth Government. That had been sent to Western Australia, and had been published by the newspaper which had published the original statement. However, a similar critical article had appeared in the Press in Sydney, and had not been followed up by the publication of the Minister's statement.

Reference was made to two articles brought forward by the South Australian Branch, in which two visiting professors were quoted by the Adelaide Press as having made statements which could be regarded as critical of the profession in Australia and detrimental to its reputation. The President pointed out that nothing should be done in such matters without verifying the authenticity of the alleged statement, and it was decided to take no action in the particular instances quoted. However, it was decided that the Federal Council should communicate with all those bodies responsible for bringing overseas lecturers to Australia, requesting them to warn the lecturers to be cautious in making Press statements.

Special Groups.

Ophthalmological Society of Australia (British Medical Association).

Compulsory Notification of Blindness.

The General Secretary read a letter from the Honorary Secretary of the Ophthalmological Society of Australia (British Medical Association), referring to the question of compulsory notification of blindness by legislation. It was stated that the executive of the Society wondered whether such notification would not be an undue interference with personal liberty, as it was obviously quite different from the question of notification of infectious diseases. At the same time, some members of the Society were pressing strongly for compulsory notification of blindness for the purposes of statistical surveys. A copy of a letter received from the Director-General of Health was included, and the opinion and advice of the Federal Council were sought. In the letter, the Director-General of Health said that the question had been discussed at recent meetings of the National Health and Medical Research Council, the Public Health Committee of which had passed a resolution asking each State to give consideration to the matter and to take early action to have blindness made notifiable in the State in accordance with the definition recommended by the Society. The committee considered that the use of the form of notification would not be practicable in the hands of the general practitioner, and that it should be used to report subsequent investigations by ophthalmologists. The Director-General had suggested that the Society should approach the several State health authorities with a view to initiating necessary action.

The General Secretary said that the matter had been referred to the Branches, and the majority were not in

favour of compulsory notification of blindness. After further discussion, the Federal Council resolved that it did not approve of compulsory notification of blindness.

Seventeenth Annual and Scientific Meeting.

The General Secretary advised that the Ophthalmological Society of Australia would be holding its seventeenth annual and scientific meeting in Melbourne on September 30, 1957.

Registration of Persons Engaged in Practice of Optometry in the Australian Capital Territory.

The General Secretary reported that the proclamation of the ordinance dealing with the registration of persons engaged in the practice of optometry in the Australian Capital Territory had been deferred.

Australian Rheumatism Association.

A letter was received from Dr. R. G. Robinson, the Honorary Secretary of the Australian Rheumatism Association, advising that the Association had been formed in August, 1956, and requesting recognition as a Special Group within the British Medical Association. The Federal Council approved its recognition.

Medical Ethics.

At the August, 1956, meeting of the Federal Council, as a result of a communication received from the Western Australian Branch, the Federal Council expressed the opinion that medical practitioners requiring radiological or pathological investigations for patients should refer such patients to legally qualified medical practitioners practising the appropriate specialty. The General Secretary said that a letter had been subsequently received from the Western Australian Branch, in which it was stated that the Federal Council's decision had been promulgated to members. Immediately after its publication, a number of members had protested to the Branch Council that the application of the decision in Western Australia was not in the best interest of patients. In view of those representations, the Branch Council had given the matter further consideration, and had promulgated to members a notice which pointed out that the Branch Council viewed with regret the tendency for non-medical persons with technical knowledge to practise alone and deal with patients, but had decided that any person established in practice in Western Australia should not be affected by the Federal Council decision previously published. It was stated that during the discussion at the Branch Council, reference had been made to an article which appeared in *The Lancet* of October 13, 1956, entitled "The Greater Medical Profession"; this was an extract from an address entitled "The Medical Empire", delivered by Dr. T. F. Fox at the annual meeting of the Manchester Medical Society on May 2, 1956. (See a leading article in The Medical Journal of Australia, December 29, 1956.) In that address, particular reference had been made to the future relationship between the medical profession and ancillary services, and the point had been made that the medical profession should encourage those services to form themselves into professions which should be helped by the medical profession to acquire responsibility and prestige as components of the "greater medical profession". Members of the Western Australian Branch Council considered that the Association in Australia might well direct its attention to this broader aspect of a problem which was assuming larger proportions with the increase in the number and type of ancillary services essential to the practice of medicine. The Branch Council requested that the question of the relationship between the medical profession and ancillary services should be placed on the agenda for the next Federal Council meeting. The matter was discussed at length from a variety of viewpoints, without the arrival at any firm decision, and it was decided that the matter should be referred to the Branches for consideration.

Company Formation by Medical Practitioners.

A letter was received from the New South Wales Branch, advising that the Council of the Branch, believing that medical practice could be conducted in an ethical manner by members of the profession who were members of companies, recommended that no objection be taken to medical practitioners forming themselves into companies, provided that the following conditions were fulfilled: (i) Membership of the company should be confined to medical practitioners. (ii) No member should practise his profession as a member of a company or conduct his practice in association with such company unless the control of the company was at all times completely in the hands of registered medical practitioners. (iii) The governing director should at all times be a registered medical practitioner. The New South Wales Branch Council had also decided that members should be informed that the Council did not approve of the formation of companies for the provision of medical services in which lay persons were members of the companies, irrespective of the relationship of such lay persons to the medical practitioners, who were members of the company.

Dr. Angus Murray, in discussing the letter, said that the New South Wales Branch Council was really concerned with the matter only from the point of view of ethics and standard of practice. They were not concerned with the financial or economic aspects. They were satisfied that company formation was possible without infringement of the ethics of the profession.

It was therefore decided to rescind a previous motion of the Federal Council, in which the opinion was expressed that the formation of companies by medical practitioners for the purpose of carrying on medical practice was prejudicial to the doctor-patient relationship and undesirable. A resolution was then adopted following the lines of the New South Wales recommendations in the following terms:

> That no objection be taken to medical practitioners forming themselves into companies for the practice of medicine, provided that the following conditions are fulfilled, *viz.*:
>
> (1) Membership of the Company shall be confined to medical practitioners actively engaged in medical practice.
>
> (2) No member shall practise his profession as a members of a Company or conduct his practice in association with such Company, unless the control of the Company is at all times completely in the hands of registered medical practitioners.
>
> (3) The Governing Director shall at all times be a registered medical practitioner.

The Federal Council Medical Monograph Fund.

A letter was received from Dr. B. H. Gandevia, expressing appreciation of the honour done to him in accepting for publication his monograph entitled "An Annotated Bibliography of the History of Medicine in Australia".

Dr. W. F. Simmons presented a financial statement for the Federal Council Medical Monograph Fund for the year ended December 31, 1956. This showed a credit balance of £2466. The credit balance had increased by £68 from that at the end of the previous year, the increase being the result of interest on Commonwealth Treasury Bonds. No further donations to the Fund had been received during the year.

Australian Post-Graduate Federation in Medicine.

The General Secretary reported that he had received minutes of the meetings of the Executive Committee of the Australian Post-Graduate Federation in Medicine for September 9, October 2 and December 11, 1956. He had also received a notice of the general meeting of the Federation, which was held on October 9, 1956, and a report of the activities of the Federation for the year 1956.

British Medical Association.

The General Secretary reported that he had received from the Parent Body of the British Medical Association a notice regarding the annual general meeting to be held at Newcastle-on-Tyne from July 10 to 19, 1957, and had sent a copy of the notice to the Branches. He had also received notices regarding the prizes awarded by the Parent Body and a copy of the summary of regulations for post-graduate diplomas and of courses of instruction in post-graduate medicine issued by the Empire Medical Advisory Bureau.

The General Secretary reported that he had received a letter from the Assistants and Young Practitioners Subcommittee of the General Medical Services Committee of the Parent Body, seeking information in regard to the Australian health service. The desire of the subcommittee was to obtain first-hand evidence and frank comment. The General Secretary said that he had sent a detailed reply, and had received a letter of thanks from the Deputy Secretary of the British Medical Association.

The General Secretary also reported that he had received a copy of the latest edition of the Year Book of the British Medical Association and had again advised the Parent Body of errors in the Year Book in details of the office-bearers of the Federal Council.

A letter was received from Dr. H. W. Horn, in which he thanked the Federal Council for its letter of appreciation of his report on the annual general meeting of the Association at Brighton in 1956. The General Secretary also reported that he had had some correspondence with the Parent Body with regard to advertisements in the *British Medical Journal* and with regard to a pamphlet on medical practice in Australia, which was undergoing revision.

British Commonwealth Medical Conference.

A letter was received from the Secretary of the Parent Body of the British Medical Association, in which it was pointed out that very reluctantly the Council of the British Medical Association had found itself obliged, for financial reasons, to propose a postponement of the Fifth British Commonwealth Medical Conference which had been planned for July, 1957. It was hoped that, as a result of a carefully planned economy campaign, it would be possible to reach a much more satisfactory financial position by the end of 1957, and to welcome the members of the Fifth British Commonwealth Medical Conference in London in July, 1958. The Federal Council expressed regret that the change was necessary, but appreciated that it was inevitable. During the discussion, Dr. Robert Southby emphasized the importance of other members of the conference contributing their fair share to the expenses, more than 50% of which were borne by the Parent Body of the British Medical Association.

National Health and Medical Research Council.

The General Secretary reported that he had received from the Director-General of Health copies of the official report of the Fortieth Session of the National Health and Medical Research Council held in Sydney in November, 1955.

A letter was received from Dr. W. F. Simmons, the representative of the Federal Council on the National Health and Medical Research Council, enclosing a copy of a report by Dr. F. G. Morgan on the use of antitetanus serum for the treatment of traffic accident victims. Copies of the communications had been sent to the Branches. The Queensland Branch had replied, asking that the opinion of the National Health and Medical Research Council be sought on the value or otherwise of the use of antitetanus serum as a prophylactic serum. The New South Wales Branch had asked that the Federal Council should support plans for the active immunization against tetanus of the whole civilian population, and emphasized the need for persons so immunized having a personal record of their immunization. They had pointed out that the Branch Council had drawn up a card, on which could be recorded all prophylactic injections given to patients by their doctors, and the card had been printed by the Australasian Medical Publishing Company Limited. The General Secretary reported that there had been general support for the New South Wales Branch suggestion on the part of the other Branches. In the discussion, it was agreed that there might be objections to mass immunization, as the risk of tetanus was small. However, the real problem was related to what should be done for a patient who had had an accident. If everyone was immunized, a standard procedure could be adopted. There were also difficulties about the use of a card from the practical viewpoint, but no alternative method seemed to be offering, short of placing a tattoo mark on the individual. The Federal Council resolved to support plans for the active immunization against tetanus of the whole civilian population, and emphasized the need for persons so immunized having a personal record of their immunization.

Dr. W. F. Simmons reported on the Forty-Second Session of the National Health and Medical Research Council, held in Sydney on November 8, 1956. He said that an extra £20,000 had been made available for medical research; this had made it possible for practically all reasonable requests for assistance to be granted. Dr. Simmons was thanked for his report of the session, which had been circulated to Branches and to members of the Federal Council.

The General Secretary reported that he had received a report of activities under the *Medical Research Endowment Act*, 1937, from the Chairman of the National Health and Medical Research Council, Dr. A. J. Metcalfe.

Reference was made to an alteration in the constitution of the National Health and Medical Research Council, which had been published in the *Commonwealth of Australia Gazette*, Number 51, of September 6, 1956. The main alteration was the addition to the Council of a representative of the College of General Practitioners.

Commonwealth Department of Health.

Pethidine.

At its meeting in August, 1956, the Federal Council approved of a letter and *questionnaire* to be sent to practitioners who used pethidine extensively, as part of a survey carried out by the joint Committee of the Commonwealth Department of Health and the British Medical Association. That letter was sent out. Subsequently, on November 30, 1956, the joint Committee met, and a report of the meeting was in the hands of the members of the Federal Council. It had also been sent to the Branches for their comments. A statement in the report disclosed that the Australian consumption of pethidine per million of population was conspicuously in excess of that in any other country, and that the excess was not offset by any proportional reduction in the consumption of morphine. A copy of the statement showing the world-wide consumption of pethidine and morphine was published in THE MEDICAL JOURNAL OF AUSTRALIA of January 26, 1957. The report also contained the results of the *questionnaire* sent out to practitioners, and a series of recommendations designed to remedy the present unsatisfactory position.

Speaking on the report, Dr. A. J. Murray, who with Dr. A. W. Morrow represented the Federal Council on the joint committee, said that most of the practitioners who had been questioned had been helpful and cooperative. The gist of their replies was that pethidine was used in three main ways: (*a*) appropriately, as an alternative to morphine; (*b*) unnecessarily, as a substitute for aspirin; (*c*) as a substitute for morphine or for aspirin in an amount much in excess of the apparent need. The Committee considered that there were dangers in the uncontrolled presentation of pethidine in tablet form in phials of 25 or more, and as a result there was likely to be over-prescribing of the drug. The dangers of over-prescribing of pethidine derived from the following facts: (*a*) it was a drug of addiction, (*b*) in tablet form it was readily self-administered, (*c*) the quantities issued permitted sustained self-medication, and (*d*) ready access to further supplies when the first issue was exhausted was furnished by a new prescription for the same condition. The Committee, therefore, adopted the following recommendations:

> (*a*) That the co-operation of the Pharmaceutical Benefits Advisory Committee be sought, to have Pethidine Tablets removed from List A and transferred to List B (Restricted Drugs) for use in certain specified diseases; e.g., terminal carcinoma and conditions reported to the drug authority as requiring sustained narcotic therapy (vide Queensland Poisons Regulation 54).
>
> (*b*) That requirements for painful conditions of short duration be supplied from the "Doctor's Bag".
>
> (*c*) That to meet this, a slightly more generous supply be allowed in List C (Emergency Drug Supplies).
>
> (*d*) That practitioners be notified of the change, and of the reason for the change, in the usual amendments periodically forwarded by the Commonwealth Department of Health, and that their co-operation be specifically requested.

The report of the Committee also stated that the National Health and Medical Research Council had referred to the Committee for professional opinion a request by the Commonwealth to the States that dangerous drug legislation be amended to provide for the compulsory notification of addiction, where that provision did not already exist. The members of the Committee considered that the question lay outside its terms of reference, and decided to refer it to the Federal Council, one of the issues in question being the definition of drug addiction. The report was referred to the Branches. The New South Wales Branch favoured the principle of the notification of drug addiction, and supported the definition of drug addiction drawn up by the World Health Association; it recommended that the Federal Council forward a letter to members of the profession in Australia in reference to the matter of drug addiction, and take appropriate steps to have reduced the maximum quantities of drugs of addiction allowed under the general pharmaceutical benefits. The Victorian Branch opposed the suggestion that pethidine be placed on the list of restricted drugs, and suggested as an alternative that the maximum number of tablets which might be prescribed should be limited to ten; it was also opposed to compulsory notification of addiction. The Queensland Branch recommended that pethidine in tablet form be transferred to the second schedule (restricted drugs) and supported the compulsory notification of pethidine addiction. The Western

Australian Branch did not favour the recommendations that pethidine tablets should be removed from list A and transferred to list B for use in specified diseases, that requirements of patients for conditions of short duration be supplied from the "doctor's bag", or that sustained therapy should be notifiable in all States; however, it raised no objection to the recommendation that addiction be notifiable in all States. The Tasmanian Branch considered that the contents of phials of pethidine should be reduced to ten tablets, but that the drug should remain on Schedule A; it also considered that the statistics given in the report should be reviewed by a statistician.

After discussion, the Federal Council expressed the opinion that pethidine in tablet form should be removed from the list of pharmaceutical benefits under the *National Health Act*, but that if it did remain on the list, the maximum number prescribable should be reduced from twenty-five to ten. The question of compulsory notification of addiction to dangerous drugs brought forward a long discussion in which both the desirability and the usefulness of such notification were questioned. However, the Federal Council finally approved of the principle of compulsory notification, and supported the definition of drug addiction adopted by the World Health Organization. This is as follows: "Drug addiction is a state of periodic or chronic intoxication, detrimental to the individual and to society, produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include (i) an overpowering desire or need (compulsion) to continue taking a drug, and to obtain it by any means; (ii) a tendency to increase the dose; (iii) a psychic (psychological) and sometimes a physical dependence on the effects of the drug." It was also decided that a letter should be forwarded to members of the profession in reference to the matter of drug addiction, and that the drafting of the letter be left in the hands of the New South Wales members of the Federal Council executive, the letter to be sent to the President for his approval and signature.

Heroin.

In response to the representations of a majority of the Branches, the Federal Council at its meeting in August, 1956, resolved to inform the Commonwealth Government that after further consideration and consultation with the practising members of the profession throughout Australia, it was of the opinion that the ban on heroin should be removed. This view was conveyed to the Minister for Health, and the General Secretary reported receipt of a reply from the Minister in which he referred to hardening of opinion overseas against heroin. The Minister suggested that for the medical profession in Australia to claim in the face of the available evidence that heroin was indispensable must make it appear a little ridiculous, particularly as some countries in which the standard of medical practice might be regarded as comparable to that in Australia had not used heroin for many years. He also pointed out that a decision to revoke the Commonwealth and State laws effecting the prohibition of importation and manufacture of heroin would entail considerable controversy and embarrassment and would require unanimity amongst all the Australian governments. The letter was received.

Lederer Lenses.

The General Secretary reported that he had had a letter from the Director-General of Health, seeking advice on Lederer lenses. The information was required for the Minister for Health, who wished to consider the question of supply of these lenses for the partially blinded. The General Secretary read a report on the subject prepared by the Ophthalmological Society of Australia (British Medical Association), and said that a copy had been sent to the Director-General of Health.

"Opportunities Available for Australians to Study Overseas."

The General Secretary reported that he had received from the Director-General of Health a copy of a book prepared in South Australia, entitled "Opportunities Available for Australians to Study Overseas". It was a comprehensive publication, and he had written to inquire if further copies were available.

Harvey Tercentenary Congress.

The General Secretary reported that he had received from the Director-General of Health a copy of a letter from the Honorary Secretary of the Harvey Tercentenary Congress, to be held at the Royal College of Surgeons, London, from June 3 to 7, 1957. The letter, which was accompanied by the proposed scientific programme for the Congress, had been sent on to the Branches.

World Medical Association.

Tenth General Assembly.

The General Secretary reported that he had received from Dr. L. R. Mallen a report on the Tenth General Assembly of the World Medical Association, held from October 9 to 15, 1956, and also a copy of the minutes of the Assembly from the Secretary-General. The Secretary-General had also sent a memorandum calling attention to items of particular importance on which decisions were made, and forwarded copies of resolutions dealing with atomic energy for peaceful purposes, increased funds for public health, free scientific exchange, the Pan-American Medical Confederation and World Medical Association cooperation, and the Latin-American Hospital Conference.

Council Meetings.

The General Secretary referred to the report received from Dr. L. R. Mallen on the Twenty-Seventh and Twenty-Eighth Council Meetings of the World Medical Association. The Federal Council noted with pleasure the appointment of Dr. L. R. Mallen as Vice-Chairman of the Council of the World Medical Association.

Supporting Committees.

A letter was received from the Secretary-General of the World Medical Association, expressing appreciation for the generous financial support given by the Australian Supporting Committee. A statement was also received of the revenue and expenditure from the Australian Supporting Committee to the Tenth General Assembly. This showed an excess of assets over liabilities of £1091.

Secretary-General's Letters.

The General Secretary referred to letters numbers 28, 29, 30, 31, 32 and 33 received from the Secretary-General of the World Medical Association. Copies of those had been sent to the Branches.

Social Security.

Copies were received of papers presented to the Tenth General Assembly on "Freedom of the Medical Profession and Medical Care Plans" by Dr. R. Schloegall and "The Medical Profession in Social Security Programmes" by Dr. Hector Rodriguez. The General Secretary also reported receipt of a *questionnaire* from the Secretary-General, prepared for the purpose of ascertaining whether each national social security scheme conformed with or violated the twelve principles of social security adopted by the World Medical Association. He read a copy of the replies to the *questionnaire* which he was sending on to the Secretary-General. The replies indicated that the National Health Service in Australia conformed with the twelve principles adopted by the World Medical Association.

Medical Ethics.

The General Secretary referred to correspondence from the Secretary-General of the World Medical Association, with which a copy had been sent of the International Code of Medical Ethics in Wartime formulated by the Joint Research Committee of the Red Cross, the International Committee on Military Medicine and Pharmacy, the World Medical Association and the World Health Organization. Particular reference was made to a protective medical emblem for civilian medical personnel to be used in wartime.

Dr. Mallen pointed out that the World Medical Association had insisted on the principle that the code of ethics in wartime should be the same as in peace. The International Code set out in the communication conformed to that principle, and the Federal Council approved of its adoption. Dr. Mallen pointed out further that, with regard to the protective emblem, the Red Cross could not be used by civilians, and the people in Europe from experience appreciated the need for some emblem to protect civilian medical people and installations. The proposed emblem was a red straight vertical stick, and a serpent, represented by a sinuous line over the stick, with two undulations on the left side and one undulation on the right side displayed on a white field. After discussion the Federal Council approved of the adoption of a protective emblem for civilian medical personnel in wartime, and decided that an approach should be made to the Federal Government to secure recognition

by legislation of the protective emblem as adopted by the World Medical Association.

The General Secretary reported the receipt of a copy of the report of the Medical Ethics Committee to the Tenth General Assembly.

Medical Education.

A letter was received from the Secretary-General of the World Medical Association, forwarding preliminary details of the Second World Conference on Medical Education, to be held in Chicago from August 30 to September 4, 1959. The letter also sought for (i) suggestions of candidates for appointments as Vice-Presidents and Assistant Vice-Presidents, (ii) suggestions of subjects for discussion and names and addresses of speakers, (iii) names and addresses of individuals and organizations whom it was desired to have receive invitations to attend the Conference, and (iv) advice about the contribution of the Association to the financial support of the Conference. The Federal Council decided to send a copy of the document to the Australian Post-Graduate Federation in Medicine with an invitation to the Federation to make suggestions in regard to the first three points. The Federal Council agreed to make a contribution towards the cost of the Conference.

World Peace.

The General Secretary read a letter from the Secretary-General of the World Medical Association, forwarding a recommendation that national medical associations adopt and vigorously implement a programme to promote world peace. The recommendation came from the Council of the World Medical Association as the result of a direction from the Tenth General Assembly. The following techniques were suggested as means of promoting better international relations between doctors: (i) mutual exchange visits, (ii) exchange of distinguished medical teachers, (iii) representation of all member associations in the World Medical Association at annual meetings of each member association, and (iv) holiday exchange visits of doctors and their families. The Secretary-General also sent a *questionnaire* to be completed, indicating what it was proposed to do to promote better international relations between doctors.

After a general discussion, the Federal Council resolved that it would appreciate access to reports of their medical experiences by delegations of medical practitioners visiting Asian countries.

A Committee on Occupational Health Services.

The General Secretary read a letter from the Secretary-General of the World Medical Association, advising the appointment of Dr. Gordon C. Smith, Director of Industrial Hygiene of the Commonwealth Health Department to the World Medical Association Committee on Occupational Health Services. The appointment was approved.

Aid to Hungary.

A letter was received from the Secretary-General of the World Medical Association, urging constituent associations and their members to extend every possible medical and financial aid to the Hungarian people and their doctors through the International Committee of the Red Cross, and forwarding copies of telegrams sent to the Secretary-General of the United Nations and the President of the International Committee of the Red Cross. The General Secretary reported that the letter had been sent on to the Branches.

Secretary for Australasia.

A letter was received from the Secretary-General of the World Medical Association, advising of the reelection of Dr. J. G. Hunter as the Secretary for Australasia by the Twenty-Eighth Session of the Council.

Death of Sir Lionel Whitby.

A letter was received from the Secretary-General of the World Medical Association, referring to the death of Sir Lionel Whitby, a member of Council and Chairman of the Medical Education Committee. The Federal Council noted the death of Sir Lionel Whitby with regret.

Meeting of Council in Sydney.

A letter was received from the Council of the World Medical Association, accepting the invitation of the Federal Council to hold the thirty-fifth Council meeting of the World Medical Association in Sydney in March, 1959.

Road Accidents.

In response to a request from the World Medical Association for subjects to be considered by the General Assembly, the Federal Council, at its meeting in August, 1956, resolved to inform the World Medical Association that the Federal Council would like the matter of road accidents considered from the preventive medicine aspects. The Secretary-General had subsequently written to convey the following decision of the Tenth General Assembly, held on October 9, 1956:

> Whereas, the death and maiming of humanity throughout the world is increasing each year; and
>
> Whereas, it is the duty and responsibility of the medical profession in every country of the world to assist in the preservation and maintenance of human life;
>
> Therefore, be it resolved, that The World Medical Association recommend to its member associations that they cooperate with other agencies and authorities within their countries in whatever degree is possible and necessary in a concentrated endeavour to save and preserve human life.

In a general discussion, Dr. Robert Southby advocated the need for some vigorous local action and pointed out that the problem of road accidents had many medical aspects in which the medical profession was entitled to be interested. The Federal Council decided to approach the Federal Minister for Health, requesting him to give consideration to the magnitude of the problem of deaths and invalidity caused by road accidents, and earnestly requesting that he give this matter serious consideration from the aspect of preventive medicine. It was decided further to inform the Minister that the Federal Council would be willing to cooperate by the formation of a committee sponsored by the Commonwealth Government to collect detailed information on the problem.

Annual Subscription.

The Federal Council agreed to pay the annual subscription to the World Medical Association in the amount suggested by the Council of the World Medical Association, namely, one Swiss franc per member.

"World Medical Journal."

A letter was received from the Secretary-General, asking for the names of correspondents for the *World Medical Journal* and drawing attention to the need for articles, particularly scientific articles, for the journal. The matter was left in the hands of the General Secretary and the Acting Editor of THE MEDICAL JOURNAL OF AUSTRALIA.

Secretariat Liaison Conference.

The Secretary-General of the World Medical Association sent a report of the Secretariat Liaison Conference, held in New York on October 19 and 20, 1956.

Passport of Australian Representative on Council.

The Federal Council decided that, in view of the frequent trips taken overseas by Dr. L. R. Mallen as representative of the Federal Council on the Council of the World Medical Association, and in view of the importance of the work he was doing, application should be made to the Department of External Affairs for the granting to him of a quasi-diplomatic passport.

REPATRIATION DEPARTMENT.

Medical Benefits for Widows, Widowed Mothers and Orphans of Deceased Ex-Servicemen.

At its meeting in August, 1956, the Federal Council resolved that in the event of the reply from the Repatriation Department to the Federal Council's request in regard to rates for attendance on widows, widowed mothers and orphans of deceased ex-servicemen being unfavourable, the Federal Council considered that the present capitation system should continue. Subsequently, a letter was received from the Chairman of the Repatriation Commission, advising that the Government had decided that the fees payable to repatriation local medical officers should remain unchanged. It was explained that fees to be paid for attendance on widows and dependants of deceased ex-servicemen were to be the same as those paid to local medical officers—namely, 12s. 6d. per consultation or visit. The matter was referred to the Branches, and the New South Wales Branch recommended that the agreement with the Repatriation Department for the payment on a per-capita basis of medical

practitioners providing medical services to all widows and their dependants should be terminated, and that a request should be made for substitution in lieu thereof of a fee-for-service method of payment. After discussion it was decided to defer consideration of the question till the next meeting of the Federal Council.

Local Medical Officers.

After consideration of the comments of the Branches on the advice of the Repatriation Department concerning the payment of local medical officers and further discussion, it was decided to refer the matter back to Branch Councils for further consideration.

Form 70.

A recommendation was received from the Western Australian Branch that the Repatriation Department be requested to arrange that each pad of prescription forms (Form Number 70) be stapled and perforated and have a stiff cardboard backing. The Federal Council resolved to approach the Repatriation Department with a request in these terms.

Appointment of Repatriation Medical Officers.

The General Secretary read a letter from The Royal Australasian College of Physicians, requesting a meeting between the President of the Federal Council and the Presidents of the Royal Australasian Colleges of Physicians and Surgeons regarding the conditions of appointment of repatriation medical officers and various other matters. It was stated that the Colleges recognized that representations should be made through the British Medical Association, but they desired to be given an opportunity to express their views.

Department of Social Services.

A letter was received from the Director-General of Social Services addressed to the New South Wales Branch, expressing appreciation for the cooperation extended by the Association in connexion with the itinerary arranged for Dr. Howard Rusk during his visit to Australia in October and November, 1956, on the invitation of the Commonwealth Government.

In response to a letter from the Director-General of Social Services, the Federal Council approved of the appointment of Dr. Douglas Galbraith as an additional representative on the Commonwealth Rehabilitation Advisory Committee.

Rehabilitation Services.

At the meeting of the Federal Council in February, 1956, it was resolved to ask the Branches to furnish to the Federal Council information regarding the rehabilitation services in their States, with any suggestions for their improvement. The General Secretary reported that all the information from the Branches was not yet available, and the matter was again deferred.

Armed Services.

The General Secretary reported that, in accordance with the instructions of the Federal Council, a letter had been written to the Prime Minister, setting out a series of constructive suggestions designed to overcome the shortage of doctors in the Armed Services, and so to increase the efficiency of the medical services, and at the same time requesting that the Prime Minister should receive a deputation from the Federal Council. The Prime Minister had replied, saying that because of limitations on his own time, he had asked his colleague, the Minister for Defence, Sir Phillip McBride, to receive the deputation on his behalf. Sir Phillip McBride had subsequently written to the General Secretary, expressing his willingness to receive a deputation, and a conference was held with him on January 24, 1957. The Federal Council was represented by the President, the Vice-President, Dr. Robert Southby and the General Secretary. The President reported that the Minister had received the deputation warmly and had lent a sympathetic ear to the suggestions, some of which were being implemented. The Minister, however, had pointed out that the position had the nature of a vicious circle. To implement a number of desirable features it was necessary to have a full establishment of medical officers; this applied particularly to such things as leave and post-graduate study. In the absence of a full establishment, these provisions could not be made, the service was therefore less attractive, and the establishment remained unfilled. The Minister had said that every endeavour had been made to keep the rates of pay at an attractive level, and the subsidizing of medical students had proved a valuable method of obtaining recruits. The need for improving the clinical training was recognized, and the Minister considered that it would be an advantage to have common hospitals for the Armed Services personnel.

In discussing the report of the conference, Dr. Angus Murray spoke of the need to provide professional inducements in the way of hospital work and post-graduate study. The need was for the three services to combine with a common hospital. Dr. Edgar Thomson emphasized the importance of hospital and clinical work, and suggested that the only practical approach was for the armed services to have part of the repatriation hospitals. The Federal Council decided to send a letter to the Minister for Defence, thanking him for his reception of the deputation, and emphasizing first the desirability of the establishment of hospitals common to all services in each State, and second the desirability of the establishment of a committee comparable to the Waverley Committee in Great Britain, as discussed with him by the deputation.

At the meeting of the Federal Council in August, 1956, it was decided to approach the department controlling the Armed Services with a request that services rendered by civil medical practitioners should be paid for at current rates for comparable services in private practice in the community. After some discussion, it was decided to rescind this resolution, and to advise the Branches that the Federal Council was of the opinion that members should look to their patients who were service personnel and not to the department concerned for payment for their services. The General Secretary reported that the question of rates of pay of medical practitioners attending as members of medical boards had not yet been looked into.

Workers' Compensation Acts.

The General Secretary read the replies from the Branches, commenting on the resolution of the Federal Council at its meeting in August, 1956, in which it disapproved of the staffing by members of the Association of a clinic established by an insurance company for any purpose other than emergency treatment, and inspection of the injured worker. The New South Wales Branch supported the principle in the resolution. The Victorian Branch regarded the question as not a Federal matter, owing to the dissimilarity in workers' compensation Acts in the States and the difference in facilities provided by private practitioners for treatment of injured workers in different areas. The South Australian Branch fully supported the principle of the resolution; it drew attention to strict conditions that had been laid down by the South Australian Branch Council in relation to the staffing of the "Chamil" clinic which had been established by the Chamber of Manufacturers Insurance Limited. The Tasmanian, Western Australian and Queensland Branches all supported the resolution of the Federal Council.

The Limbless Soldiers' Association of Australia.

The General Secretary reported on further negotiations that had been carried on in association with the Limbless Soldiers' Association of Australia, the Canteens Trust Fund and the Returned Sailors, Soldiers and Airmen's Imperial League of Australia, in an endeavour to improve the standard of general management of and limbs supplied to ex-servicemen who had undergone amputation of a limb.

Australian Road Safety Council.

A letter was received from the Acting Chairman of the Australian Road Safety Council, expressing appreciation of the Council's action in stating its views in relation to a *pro forma* for clinical medical examination, the payment of doctors and experts, and the provision of a panel of doctors for week-ends and holidays.

Superannuation for Self-Employed Persons.

A letter was received from the Queensland Branch informing the Federal Council that the early setting up of a superannuation fund for self-employed doctors was an urgent necessity. The Queensland Branch advised that it proposed to arrange the setting up of such a fund shortly, and asked the Federal Council whether the formation of such a fund on a Federal basis was proposed, so that arrangements might be made in a trust deed for the eventual merging of the Queensland fund with the Federal fund. The General Secretary expressed the view that superannuation funds were desirable, but that care was necessary in the handling and investment of funds. He reported

on discussions that he had had with a member of the firm of staff superannuation consultants which was advising the Queensland Branch, and also supplied a copy of the comments of another accountant on the memorandum submitted by the Queensland Branch's adviser. The matter was discussed at length, and Dr. Robert Southby moved that the establishment of any superannuation schemes should be on a State basis. The President pointed out that such a scheme required continuous attention, and that this was not practicable for a scheme managed by the Federal Council. However, Dr. J. G. Wagner moved as an amendment that the consideration of the matter be deferred until the next meeting, and this suggestion was adopted.

Proprietary Medicines Advisory Committee.

A letter was received from the Australian Newspaper Proprietors' Association, requesting the appointment of a representative to take the place of the late Sir Archibald Collins on the Proprietary Medicines Advisory Committee. Dr. A. J. Murray was appointed.

Salaried Medical Officers.

A letter was received from the College of Radiologists of Australasia, relating to the salaries and working conditions of full-time radiologists. It was pointed out that salaries and conditions varied considerably in different States, and that uniformity would be desirable. It was realized that many positions were under State Government control, but it was suggested that some effort might be made through Federal channels to obtain uniformity. It was suggested that the salaries be not less than those provided for repatriation medical officers by the Commonwealth Arbitration Court, that the professional standards should be maintained by adequate provision for overseas travel and study leave, and that as far as possible consultant staff should have a limited right of private practice, and that staff establishments should conform to the standards recommended by the Faculty of Radiologists of Great Britain. The College requested that the matter be brought to the attention of the Federal Minister for Health. The Federal Council decided to defer consideration of the matter, as all the necessary information regarding details of salaries had not yet been obtained.

The General Secretary reported progress on negotiations regarding disabilities under which medical officers of the Repatriation Department were working.

Radioactive Substances Act.

A letter was received from the New South Wales Branch, asking for the support of the Federal Council in the Branch's protest to the New South Wales Government against certain provisions of the Radioactive Substances Bill at present before the New South Wales Parliament. Particular exception was taken to a provision of the Bill, which required that a medical practitioner must have a licence before being allowed to sign a prescription prescribing a radioactive substance. It was pointed out in discussion that the New South Wales Bill was based on a model Bill prepared by a special committee for the Commonwealth Government, and approved by the Federal Council in 1953. The Federal Council decided not to support the New South Wales Branch in its protest.

Conditions of Service of Ships' Surgeons.

The General Secretary reported on correspondence that had been carried on with the Steamship Owners' Federation about the conditions of service of ships' surgeons. He advised that the salary had been increased from £900 to £1000 *per annum*.

Australian Social Welfare Council.

The General Secretary outlined the constitution of the Australian Social Welfare Council, of which the Federal Council was a foundation member. He said that it was made up entirely of voluntary organizations, and its objects were *inter alia* to promote social welfare and to act as a channel of approach to the Commonwealth and State Governments on matters affecting social welfare and the interests of the bodies represented. At present it was particularly dealing with the social problems relating to the welfare of widows and Australian aborigines. The General Secretary said that the minimum annual subscription fee was £5 5s., but many of the bodies associated with it had paid larger sums. The Federal Council approved of the payment of an annual subscription of £50 to the Council.

London House.

A letter was received from London House, expressing appreciation of a further donation of £2 10s. 2d. sterling.

Date and Place of Next Meeting.

It was resolved that the place of the next ordinary meeting should be in Adelaide, at some time in September, and that the exact date should be left in the hands of the President.

Votes of Thanks.

A vote of thank was extended to the New South Wales Branch for its hospitality, and for the use of its offices.

A further vote of thanks was extended to Dr. and Mrs. Angus Murray for their hospitality.

The Council thanked the President, Dr. H. C. Colville, for having presided at the meeting.

The Council also thanked Dr. J. G. Hunter and Miss H. Cameron for their services during the meeting.

Out of the Past.

In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.

EARL FITZWILLIAM TO D'ARCY WENTWORTH.[1]

London,
26 June, 1793.

SIR,

It gave me much satisfaction to receive a letter from Governor King at the same time I received your last. The Governors letter was for the purpose of expressing his satisfaction in your conduct and his wish that you should be confirmed in the appointment he had conferred upon you. I have no connection with the Secretary of State and could not therefore make a direct application to him but I spoke to Mr. King the Under Secretary upon the subject and have no doubt that the ship which carries this will carry also the confirmation of your appointment. I trust that, as the settlement gains strength by the exertion of the settlers, the comforts and conveniences of life will gradually increase, which, whilst it furnishes many substantial benefits, furnishes also an agreeable contemplation for those who view such daily improvement. I send by the present ship an assortment of things that I fancy will be useful to you.

Wishing you health, happiness and prosperity.

Yours, etc.,

WENTWORTH FITZWILLIAM.

Correspondence.

CONGENITAL MALFORMATIONS AND MATERNAL RUBELLA.

SIR: The compilation of a critical review of high quality is an exacting task, and requires considerable judgement and vigilance if the author is to present the views of previous investigators accurately and fairly. After reading the article by Dr. David Pitt entitled "Congenital Malformations and Maternal Rubella", which appeared in THE MEDICAL JOURNAL OF AUSTRALIA on February 23, 1957, on page 233, I find it necessary to suggest that Dr. Pitt has proved unequal to the task.

In support of this view I should like to point out that neither the first nor the third of Dr. Pitt's quotations from our work is a facsimile of the original. In addition there are inaccuracies in his Table III.

Dr. Pitt has omitted important introductory phrases such as "on the available evidence". By altering the context he creates the erroneous impression that we were drawing firm

[1] From the original in the Mitchell Library, Sydney.

conclusions, whereas in point of fact we were merely drawing tentative ones to be modified with the accumulation of more evidence. As Dr. Pitt would have realized if he had read the South Australian work and my Katherine Bishop Harman Prize Essay with care, I am not blind to the statistical and other inadequacies of a retrospective survey, and throughout the series of papers have been at pains to emphasize this fact. In case those interested should have been unduly influenced by Dr. Pitt, I would recommend them to read the original papers for themselves.

Dr. Pitt criticizes our criteria for the diagnosis of congenital cardiac defects. He fails to point out, however, that in both of the papers we published in 1946 we voiced similar criticisms and suggested reexamination of the children at intervals as they grew older. It is of interest to note that of the seven examples cited in which Dr. Pitt questions the diagnosis of cardiac abnormality, and which by implication should not have been incorporated in the series of cases with congenital malformations, all were eligible for inclusion on the grounds of other defects such as deaf-mutism and microcephaly.

Dr. Pitt would perhaps have treated us a little more kindly if he had been cognizant of conditions during the war years, when general practitioners not in the Armed Forces were grossly overworked, and research, except when directed towards aiding the war effort, was at a discount. Considerable difficulty was experienced in obtaining information while it was still fresh, and this was accentuated by the fact that at that time rubella was not a notifiable disease. Moreover, our chief collector and correlator was intermittently ambulant with an artificial pneumothorax. Looking back on those days I am amazed, not so much at the amount of information amassed, but by the fact that any was collected at all.

I would remind Dr. Pitt that this information, although in his opinion statistically beyond the pale, was of sufficient value to allow us to describe for the first time two further components of the syndrome of congenital defects following maternal rubella—namely, deaf-mutism and microcephaly—and to make a number of other observations which have excited widespread interest.

Australia is now at peace, general practitioners are less overworked, research is being encouraged and, except in New South Wales, rubella is now notifiable, so that Dr. Pitt should experience little difficulty in collecting statistically significant data on the frequency with which congenital abnormalities follow maternal rubella. It is up to all of us to try to help him.

Yours, etc.,

CHARLES SWAN.

Elizabeth House,
231 North Terrace,
Adelaide.
March 4, 1957.

Post-Graduate Work.

AUSTRALIAN VICE-CHANCELLORS' COMMITTEE: NUFFIELD DOMINIONS TRUST.

Appointments at Oxford Medical School.

THE Registrar of the University of Oxford has advised that nominations are now invited from Australian universities to fill two appointments in the Oxford Medical School in the academic year beginning in October, 1957.

The appointments are as follows: (a) one demonstratorship tenable in one of the following departments: biochemistry (three-year tenure preferred), human anatomy, physiology; (b) one clinical assistantship in either of the following departments: clinical medicine, orthopædic surgery (two-year tenure preferred).

Except as stated, the appointments will be tenable for either two or three years, whichever is more convenient to the nominating university. Applicants are requested to indicate clearly the period of appointment agreeable to their university.

Duties will commence on October 1, 1957, or as soon thereafter as possible.

The conditions are as follows: (a) The qualifications for appointment to a demonstratorship shall be graduation at one of the Dominion universities and previous experience in research. (b) The qualifications for appointment to an assistantship shall be graduation at one of the Dominion universities and a medical qualification obtained in one of the said Dominions or in Great Britain. (c) No person shall be appointed either to a demonstratorship or to an assistantship who does not intend that immediately after such appointment shall terminate he will return to the Dominion from which he was appointed for at least five years' work of a like nature as that carried out by him during his appointment.

The emoluments are as follows: The stipend will be, for women or for single men, £850 sterling *per annum*, and for married men, £1050 sterling *per annum*. The stipend is subject to the payment of United Kingdom income tax. A travel grant of £300 sterling will be available, half on appointment and half on completion of the appointment.

Applications should be made in the following way. Letters of application, in duplicate, supported by the dean of the faculty of medicine in which the applicant trained or of the university with which the applicant is now associated, should be lodged with the Secretary, Australian Vice-Chancellors' Committee, c.o. University of Melbourne, Carlton, N.3, Victoria, not later than Friday, April 26, 1957.

Further information of the details and conditions of appointment under the Nuffield Dominions Trust may be obtained from the Registrar of each of the Australian universities.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Lecture on Medical Statistics.

THE Post-Graduate Committee in Medicine in the University of Sydney announces that Dr. H. O. Lancaster will read a paper on "Mortality Statistics as Human Ecology" to the Statistical Society of New South Wales on Thursday, April 11, 1957, at 7.30 p.m. at the School of Public Health and Tropical Medicine, University Grounds. Dr. A. H. Pollard and Dr. F. W. Clements will open the discussion and members of the medical profession are invited to attend.

Revision Course at Rachel Forster Hospital for Women and Children.

A revision course will be held at the Rachel Forster Hospital for Women and Children for one week, full time, from July 29 to August 2, 1957. The course is open to all members of the medical profession, and limited accommodation is available for women graduates at £3 13s. 6d. A detailed programme will be available within the next few months.

The fee for attendance is £5 5s., and written application, enclosing remittance and indicating whether accommodation is required, should be made to the Course Secretary, Post-Graduate Committee in Medicine, 131 Macquarie Street, Sydney, not later than June 28, 1957. A minimum number of eight candidates is required. Telephones: BU 4497-8. Telegraphic address: "Postgrad Sydney."

Post-Graduate Conference at Bathurst.

The Post-Graduate Committee in Medicine in the University of Sydney announces that a post-graduate conference will be held at Bathurst in conjunction with the Western District Medical Association on Saturday and Sunday, April 27 and 28, 1957. The programme is as follows:

Saturday, April 27: 2 p.m., registration; 2.30 p.m., "Cancer of the Breast", Dr. Justin Fleming; 4 p.m., "Hepatitis and the Effect of Treatment on its Course", Dr. V. J. McGovern.

Sunday, April 28: 9.30 a.m., symposium, "Thrombosis and Embolism", Dr. Justin Fleming, Dr. V. J. McGovern and Dr. R. Cameron; 11.30 a.m., clinico-pathological conference, Dr. V. J. McGovern; 2 p.m., "The Current Management of Peripheral Vascular Disease", Dr. Justin Fleming.

The fee for attendance at this course will be £3 3s., and those wishing to attend are requested to notify Dr. Brooke Moore, 142 William Street, Bathurst, as soon as possible. Telephone: Bathurst 2345.

SYMPOSIUM ON THE BASIC SCIENCES RELATED TO ANÆSTHESIOLOGY.

A POST-GRADUATE SYMPOSIUM on the basic sciences related to anæsthesiology will be held on June 10 to 14, 1957, at

Pittsburgh, United States of America, under the auspices of the University of Pittsburgh School of Medicine. The course will be limited to 50 participants. Full particulars may be obtained from the Chairman of the Committee on Graduate Medical Education, University of Pittsburgh School of Medicine, 3941 O'Hara Street, Pittsburgh 13, Pennsylvania. Hotel reservations may be made by writing to Hotel Webster Hall, 4400 Fifth Avenue, Pittsburgh 13, Pennsylvania.

THE MELBOURNE MEDICAL POST-GRADUATE COMMITTEE.

PROGRAMME FOR MAY, 1957.

Courses for Higher Qualifications.

Course in Radiodiagnosis.—A course in radiodiagnosis, suitable for D.D.R. and D.C.R.A. candidates, will commence on May 6, 1957. Lectures will be held in the late afternoon on Mondays and Thursdays till the end of July, and where possible will be held in the X-ray departments of hospitals. Enrolments, on the Committee's forms, should be received by them not later than April 26. This course will be conducted by the Committee in consultation with the College of Radiologists.

Course in Laryngology, Otology and Special Pathology.—A course in laryngology, otology and special pathology will commence in early May, and will be conducted by the Victorian Division of the Australian Oto-Laryngological Society. Commencement of the course is subject to the receipt of a satisfactory number of enrolments, and those interested should communicate immediately with the Post-Graduate Committee at 394 Albert Street, East Melbourne.

Overseas Lecturers.

On Tuesday, April 30, 1957, the Post-Graduate Committee and the College of Radiologists (Aust. and N.Z.) have arranged the following lectures in the British Medical Association Hall, 426 Albert Street, East Melbourne: 8 p.m., "Mediastinal Lesions", Dr. Whateley Davidson, F.F.R., London; 9 p.m., "Reticulosis", Dr. John Bromley, F.F.R., London. The fee for this programme is 15s., but those who have paid an annual subscription to the Committee may attend without further charge.

On Wednesday, May 1, the College of Radiologists (Aust. and N.Z.) will entertain these lecturers at dinner, after which Dr. Bromley will speak on "Post Mortem for Shakespeare". All members of the medical profession who would be interested in dining with the College on this date are invited to do so, and should apply to Dr. D. Lloyd Dick, 105 Collins Street, before April 17.

Country Courses.

Colac.—At Colac, on May 18, 1957, the following lectures will be given: "Common Neurological Disorders", Dr. A. C. Schwieger, 4 p.m.; "Intestinal Obstruction", Mr. J. C. Guest, 8.30 p.m. Dr. R. R. Sobey, 102-104 Liebig Street, Warrnambool, is the local secretary for this course.

Ballarat.—At Ballarat, on May 23, at Craig's Hotel at 8.15 p.m., Dr. Keith Bowden will lecure on "Medico-Legal Problems". Dr. N. F. Pescott, 626 Sturt Street, Ballarat, is the local secretary.

Demonstration at Flinders Naval Depot.—At Flinders Naval Depot, at 2.30 p.m. on Wednesday, May 1, Mr. K. Bradley will discuss "Amputation Problems". This is by arrangement with the Royal Australian Navy.

COURSES IN JUNE, 1957.

A course in medicine, suitable for candidates for senior medical qualifications such as M.D. II and M.R.A.C.P., will commence at the Alfred Hospital on June 3, 1957, and continue, full time, for eight weeks. Enrolments, together with the fee of £31 10s., should be sent to the Post-Graduate Committee, who will supply further information.

A course in psychiatry, suitable for D.P.M. candidates, will commence in early June, 1957.

A course in pathology, suitable for candidates for the primary F.R.A.C.S., will commence on June 25.

Mr. E. P. Wilson, ear, nose and throat surgeon, of Middlesex Hospital, will visit Melbourne from June 24 to 29, 1957, and give evening lectures on June 24 and 27.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED MARCH 16, 1957.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism	..	1	4(3)	1	..	..	..	..	6
Amœbiasis	..	..	..	..	..	..	..	..	..
Ancylostomiasis	..	..	1(1)	..	..	..	..	..	1
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	1(1)	2	..	..	..	..	..	..	3
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	3(1)	15(13)	1(1)	..	..	..	..	..	19
Diphtheria	..	2(2)	1	..	7	..	..	..	10
Dysentery (Bacillary)	..	5(5)	5(5)	1(1)	..	..	..	..	11
Encephalitis	..	5(5)	..	1	..	..	..	..	6
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	..	..	..	..	..	..	..	..
Infective Hepatitis	59(29)	47(18)	..	11(8)	4	4	1	2	128
Lead Poisoning	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	2	..	1	..	3
Leptospirosis	..	..	1	..	..	..	..	..	1
Malaria	..	..	2	..	..	..	6	..	8
Meningococcal Infection	1(1)	4(2)	1	..	..	..	..	..	6
Ophthalmia	..	..	..	2	..	..	4	..	6
Ornithosis	..	..	..	..	..	..	..	..	..
Paratyphoid	..	..	..	..	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	3(1)	..	2	..	1	..	..	..	6
Puerperal Fever	..	..	..	..	..	..	..	..	..
Rubella	..	29(24)	..	20(6)	6(5)	..	..	..	55
Salmonella Infection	..	..	..	..	..	..	..	..	..
Scarlet Fever	7(5)	11(6)	5(1)	8(8)	1(1)	..	1	..	33
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	..	1(1)	1	..	1(1)	..	1	..	4
Trachoma	..	..	..	..	1	..	..	..	1
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	40(24)	16(10)	20(12)	2(1)	11(8)	2(2)	..	..	91
Typhoid Fever	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne)	..	..	2	..	..	..	..	..	2
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.

INFORMATION.

The address of the Melbourne Medical Post-Graduate Committee is 394 Albert Street, East Melbourne, C.2. Telephone: FB 2547.

Naval, Military and Air Force.

HONOURS.

THE following honour is promulgated in the *Commonwealth of Australia Gazette*, No. 17, of March 14, 1957.

AUSTRALIAN MILITARY FORCES.

The Australian Efficiency Decoration.

3/157150 Colonel Cecil Ashley Marshall Renou, Royal Australian Army Medical Corps (Medical) (now Reserve of Officers).

University Intelligence.

THE UNIVERSITY OF SYDNEY.

Lectures by Professor J. M. Robson.

THE Department of Pharmacology of the University of Sydney announces that the following open lectures will be delivered at the University at 8 p.m. on the dates and at the places shown, by Professor J. M. Robson, M.D., D.Sc., F.R.S.E., 1957 Visiting Professor of Pharmacology: Monday, April 15, at the Wallace Theatre, Science Road, "The Discovery of New Drugs"; Wednesday, April 17, at The Barn Lecture Theatre, outside the New Medical School, "The Chemical Control of Cells"; Monday, April 29, at The Barn Lecture Theatre", "New Hormones for Old".

Professor Robson is Professor of Pharmacology at Guy's Hospital Medical School, London, and is an active research worker in chemotherapy, particularly in connexion with tuberculosis. These lectures are open to students, to members of the University staff, to the medical profession, and to all who are interested in this field of science. Admission is free, and tickets are not required.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Allen, Eric Abbott, M.B., B.S., 1956 (Univ. Sydney), Windang Road, Windang, New South Wales.

Bell, John Michael, M.B., B.S., 1955 (Univ. Sydney), 4-12 Church Street, Hunter's Hill, New South Wales.

Blomley, Jack, M.B., B.S., 1953 (Univ. Sydney), 61A Mitchell Street, Stockton, New South Wales.

Shuhevych, Ivan, registered in accordance with the provisions of Section 17 (1) (*c*) of the *Medical Practitioners Act*, 1938-1955, 237 Macquarie Street, Liverpool, New South Wales.

The undermentioned have been elected as members of the New South Wales Branch of the British Medical Association: Atkinson, Raymond Julian Malcolm, M.B., B.S., 1957 (Univ. Sydney); Berry, Francis Robert, M.B., B.S., 1957 (Univ. Sydney); Buckler, Edward George, M.B., B.S., 1957 (Univ. Sydney); Colbourn, Isobel Faith, M.B., B.S., 1957 (Univ. Sydney); Gallagher, Niel David, M.B., B.S., 1957 (Univ. Sydney); Jaworska, Maria, M.B., B.S., 1957 (Univ. Sydney); O'Hare, William de Burgh, M.B., B.S., 1957 (Univ. Sydney); Dawson, Peter James, M.B., B.S., 1956 (Univ. Sydney); Vaughan, John Bede, M.B., B.S., 1956 (Univ. Sydney); Cross, Janet Buchan, M.B., B.S., 1955 (Univ. Sydney); Crooks, John Yale, M.B., B.S., 1954 (Univ. Sydney); Mattocks, Kyrle Maitland, M.B., B.S., 1947 (Univ. Sydney); Preswick, George, M.B., B.S., 1955 (Univ. Sydney); Wake, Peter John, M.B., B.S., 1955 (Univ. Sydney); Williams, Lorna Letitia, M.B., B.S., 1952 (Univ. Sydney); Botskor, Zoltan, registered in accordance with the provisions of Section 17 (1) (*c*) of the *Medical Practitioners Act*, 1938-1955; Zawadzki, Irene, registered in accordance with the provisions of Section 17 (1) (*c*) of the *Medical Practitioners Act*, 1938-1955; Wajnryb, Nelli, registered in accordance with the provisions of Section 17 (1) (*c*) of the *Medical Practitioners Act*, 1938-1955.

Congresses.

NAPT COMMONWEALTH CHEST CONFERENCE.

THE National Association for the Prevention of Tuberculosis announces that the Commonwealth Chest Conference, incorporating the annual conference of the British Tuberculosis Association, will be held in London from July 1 to 4, 1958. Registration forms and further details may be obtained from the Secretary-General, NAPT, Tavistock House North, Tavistock Square, London, W.C.1.

Deaths.

THE following death has been announced:

ALEXANDER.—Samuel James Alexander, on March 19, 1957, at Redhead, New South Wales.

Diary for the Month.

APRIL 9.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
APRIL 9.—New South Wales Branch, B.M.A.: Organization and Science Committee.
APRIL 11.—New South Wales Branch, B.M.A.: Clinical Meeting.
APRIL 12.—Tasmanian Branch, B.M.A.: Branch Council.
APRIL 12.—Queensland Branch, B.M.A.: Council Meeting.
APRIL 15.—Victorian Branch, B.M.A.: Finance Subcommittee.
APRIL 16.—New South Wales Branch, B.M.A.: Medical Politics Committee.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

Queensland Branch (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

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